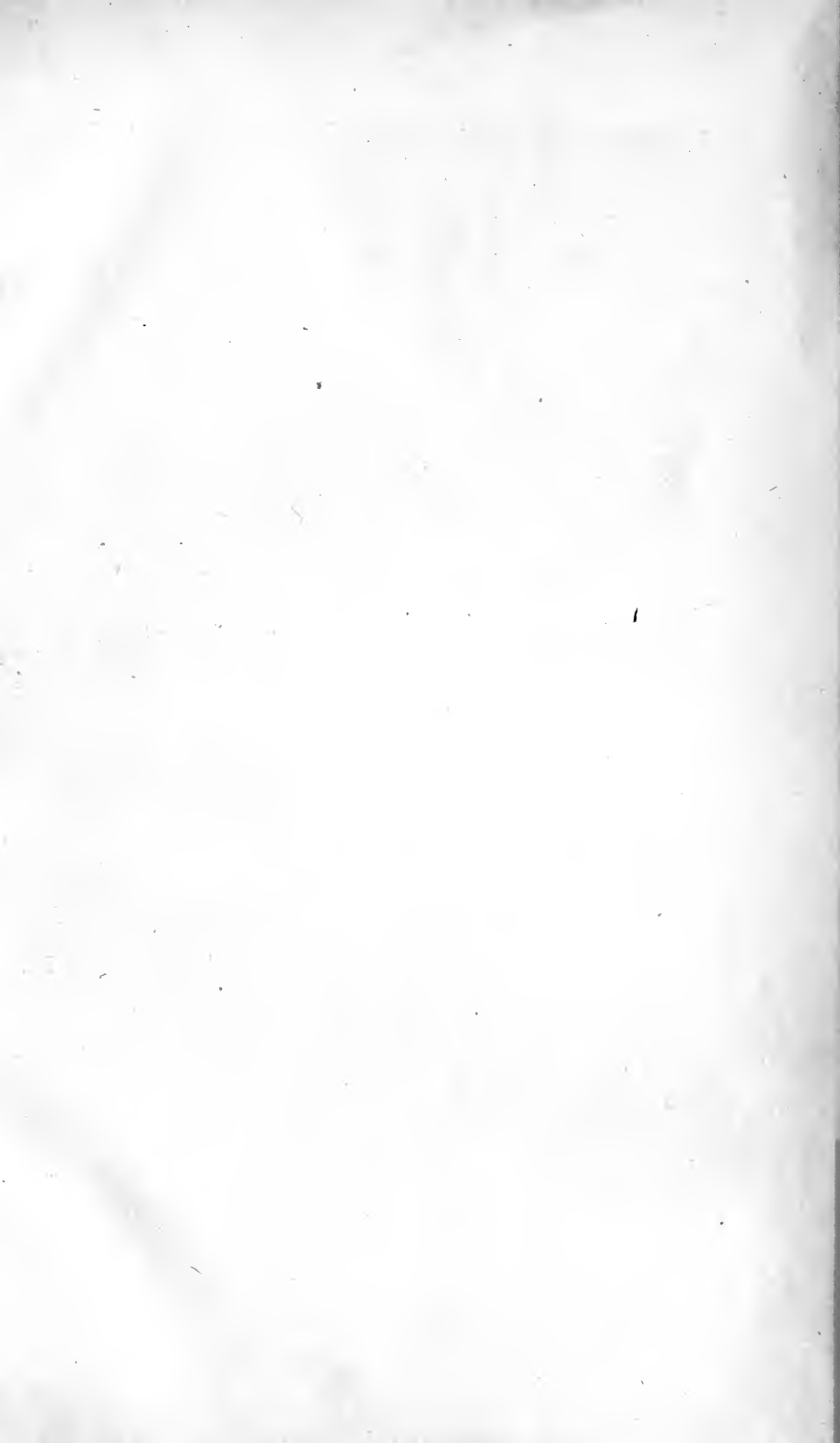


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PREFACE.

IN undertaking this catalogue the compiler has not been actuated by any ambitious motives. He began this work immediately upon his appointment to office, and has only to regret now the unavoidable delay which has attended its publication. He fully realizes the many imperfections of the work—due in part to the manner of publication, but in a larger degree to inexperience—but still ventures to hope that he has, in some measure, at least, accomplished his desire to produce a work which shall be of great assistance to persons consulting this library. It will be seen that the work is divided into two parts: Part I. SYNTHETICAL: A., Catalogue of the Systematic Works; B., Catalogue of the Periodical Publications,—wherein these works are arranged in alphabetical order, according to their author or title, and without reference to subjects; and Part II., ANALYTICAL: wherein the Systematic Works and Periodical Publications are classified with reference to subjects. Part I. B. will be found to include a copious Index, in which have been inserted many abbreviated titles, under which some of the more prominent periodicals are at times quoted. Part II. will be found to include a copious Index, the typographical arrangement of which will indicate clearly whether the reference be to a general heading, a sub-heading, or otherwise. This characteristic applies also, and in a larger degree, to the Index in Part I., B.

JOHN F. MEYER,
Librarian.



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PART I. SYNTHETICAL:

**WHEREIN THE SYSTEMATIC WORKS AND PERIODICAL PUBLICATIONS ARE ARRANGED IN ALPHABETICAL ORDER,
WITHOUT REFERENCE TO SUBJECTS.**

A. SYSTEMATIC WORKS.

B. PERIODICAL PUBLICATIONS.





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CATALOGUE OF BOOKS AND PAMPHLETS.

A.

- ABBOTT, John. Exposition of the Principles of Abbott's Hydraulic Engine. 8vo. 132 pp. Boston, 1835.
- ABEL, F. A. and Bloxam. Handbook of Chemistry. Second edition. 8vo. 785 pp. London, 1858.
- ABERT, J. J. Report in reference to the Canal to connect the Chesapeake and the Ohio Canal with the City of Baltimore. 4to. 40 pp., I. diagram. Washington, 1838.
- S. T. Is a Ship Canal Practicable? Notes, Historical and Statistical, upon the Projected Routes for an Interoceanic Ship Canal, between the Atlantic and Pacific Oceans; in which is included a Short Account of the Character and Influence of the Canal of Suez, and the Probable Effects upon the Commerce of the World of the Two Canals, regarded either as Rivals, or as parts of one system of Interoceanic Navigation. Vol. XXX., Pamphlets. Octavo series, 8vo. 88 pp., V. Maps. Cincinnati, 1872.
- ABHANDLUNGEN der Kaiserlichen Königlichen Geologischen Reichsanstalt. *See under Journals.*
- der Königlichen Bayerischen Akademie der Wissenschaften. *See under Journals.*
- ABRIDGMENTS of Specifications for Patents. *See under British Patent Office.*
- ACCUM, Frederick. A Manual of Analytical Mineralogy. Second edition. 2 vols. in one. 8vo. London, 1808.
- A Manual of Analytical Mineralogy. Vol. I. 12mo. 360 pp. London, 1808.
- A Practical Treatise on Gas Light. Fourth edition. 8vo. 190 pp. London, 1818.
- A System of Theoretical and Practical Chemistry. 2 vols. 8vo. London, 1807.
- ABSTRACT of the Returns of the Agricultural Societies of the State of Massachusetts. *See under Journals.*
- ACADEMY of Sciences of St. Louis. *See, under Journals, Transactions of the.*

- ACQUEDUCT in Washington, D. C. Portfolio of XVII. plates to illustrate.
- ADAMS, C. B. First, Second, Third and Fourth Annual Reports of the Geology of Vermont.
4 Pamphlets in one vol. 8vo. Burlington, 1845.
- John Quincy. Report of the Secretary of State upon Weights and Measures. 8vo. 245 pp. Washington, 1821.
- ADELBERG and Raymond. Report of an Examination of the Lands known as the Great Kanawha Property of West Virginia. Vol. XXX., Pamphlets. Octavo series.
8vo. 16 pp. New-York, 1864.
- ADHÉMAR, J. *Traité de Charpente*. Troisième édition.
8vo. 512 pp. text, atlas folio, LXVII. plates. Paris, 1861.
- *Traité de la Coupe des Pierres*. Sixième édition.
8vo. 540 pp. text, atlas folio, LXXXVI. plates. Paris, 1859.
- *Traité de Perspective*. 2 vols. text and atlas. Paris, 1859.
- AGASSIZ, Louis. *Anatomie des Echinodermes*. Première Monographie. *Anatomie du Genre Echinus*, par G. Valentin.
125 pp. text, atlas folio, IX. plates. 4to. Neuchatel, 1841-42.
- *Contemplations of God in the Kosmos*.
8vo. 17 pp. 1851.
- *Contributions to the Natural History of the Acalephæ of North America*:
Part I. On the Naked-eyed Medusæ of the Shores of Massachusetts in their Perfect State of Development.
96 pp., VIII. plates.
- Part II. On the Beroid Medusæ of the Shores of Massachusetts in their Perfect State of Development.
62 pp., VIII. plates. 4to. 1849.
- *Contributions to the Natural History of the United States. On the Origin of the Species*.
8vo. 15 pp. New-Haven, 1860.
- *Études Critiques sur les Mollusques Fossiles. Les Myes du Jura et de la Craie Suisse*.
4to. 287 pp., XCIV. plates. Neuchatel, 1842.
- *Études Critiques sur les Mollusques Fossiles du Jura et de la Craie Suisse. Les Trigones*.
4to. 58 pp., XI. plates. Neuchatel, 1842.
- *Études sur les Glaciers*.
8vo. 346 pp. Atlas, XVIII. plates. Neuchatel, 1840.
- *Geological Sketches*. 12mo. 311 pp. Boston, 1867.
- *Iconographie des Coquilles Tertiaires*.
4to. 64 pp., XVI. plates. Neuchatel, 1845.
- *Mémoire sur les Moules de Mollusques vivans et fossiles. Première Partie. Moules D'Acephales Vivans*.
4to. 48 pp., IX. plates. Neuchatel, 1839.
- *Methods of Study in Natural History*.
8vo. 319 pp. Boston, 1866.
- *Monographies D'Echinodermes vivans et fossiles. Échinites. Famille des Cidarides. Première Monographie—Des Salénies*. 32 pp., V. plates.

- AGASSIZ, Louis. Famille des Clypéastroides. Seconde Monographie—Des Scutelles. 151 pp., XXVII. plates.
Troisième Monographie—Des Galérites, par Ed. Desor. 94 pp., XIII. plates.
Quatrième Monographie—Des Dysasters, par Ed. Desor. 29 pp., IV. plates.
- Monographie des Poissons Fossiles du Vieux Gres Rouge ou Systeme Dévonien (Old Red Sandstone) des Iles Britanniques et de Russie.
Text, troisième livraison. 171 pp. 4to. Atlas, livraisons 1, 2, 3, XLIII. plates. Neuchatel, 1844–1845.
- Nomenclator Zoologicus continens Nomina Systematica Generum Animalium tam Viventium quam Fossilium.
3 vols. 4to. Soloduri, 1842–1847.
- Notice of a Collection of Fishes from the Southern Bend of the Tennessee River, Alabama.
8vo. 31 pp. New-Haven, 1854.
- On the Ichthyological Fauna of the Pacific Slope of North America.
8vo. 46 pp. New-Haven, 1855.
- On the Principles of Classification in the Animal Kingdom. On the Structure of the Hælyonoid Polypi; On the Morphology of the Medusæ.
8vo. 19 pp. Charleston, S. C., 1850.
- Recherches sur les Poissons Fossiles.
5 vols. 4to. text; 5 vols. plates. Neuchatel, 1833–1843.
- The Primitive Diversity and Number of Animals in Geological Times.
8vo. 16 pp. New-Haven, 1854.
- et Vogt, C. Histoire Naturelle des Poissons D'Eau Douce de L'Europe Centrale.
8vo. 326 pp.; Atlas, LV. plates. Neuchatel, 1842.
- AGRICOLÆ, Georgii. De ortu et causis subterraneorum; De naturæ eorum quæ effluunt ex terra; De natura fossilium; De veteribus et novis metallis. Bermannus, sive De re metallica Dialogus. Interpretatio Germanica nova rei metallicæ, addito Indice foecundissimo.
4to. 827 pp., III. plates. Basileæ, 1546.
- De Re Metallica Libri XII. With an Appendix, Rei Metallicæ. Nomina Latina Græcæque Germanicæ Reddita et ex Ordine, quo quodq. primo occurrit collocata.
2to. 502 pp. Basileæ, 1561.
- AGRICULTURAL Societies of the States of Massachusetts, New-York and Wisconsin. *See, under Journals*, Transactions of the.
- AICHHORN, Sigmund. Anleitung zur Flächenzeichnung einfacher Krystallgestalten.
8vo. 56 pp. Vienna, 1865.
- Geographische Vertheilung des Schiefer, Schicht-und Wasser-Gebirges in Steiermark. Vol. I., Pamphlets. Duodecimo series.
12mo. 14 pp. Gratz, 1856.
- AIM and Object of Scientific Education, as Provided in the Sheffield Scientific School of Yale College.
8vo. 24 pp. New-Haven, 1869.

- AINSWORTH. Latin and English Dictionary, with numerous Additions, Emendations and Improvements, by Rev. B. W. Beaton. Revised and corrected by William Ellis.
8vo. 1,332 pp. London, 1847.
- AKERMAN, Richard. Ueber den Standpunkt der Eisenfabrikation in Schweden zu anfang des Jahres, 1873.
Pamphlet, 8vo. 1873.
- ALEXANDER, J. H. Report on the Manufacture of Iron, addressed to the Governor of Maryland.
8vo. 269 pp. Annapolis, 1840.
- Stephen. Observation of the Annular Eclipse of May 26, in the suburbs of Ogdensburg, New-York. Vol. IV., Pamphlets. Quarto series. 4to. 11 pp., I. plate. New-York.
- ALLAN, R. A Manual of Mineralogy.
8vo. 351 pp. Edinburgh, 1834.
- T. Mineralogical Nomenclature, with Synoptic Tables of the Chemical Analysis of Minerals. 8vo. Edinburgh, 1814.
- ALLEN, H. Monograph of North America Bats. *Smith. Mis. Coll.* 8vo. 85 pp. Washington, 1864.
- ALMY, Lieut. See Washington Astronomical and Meteorological Observations.
- AMAIL, Victor. Manuel des Alliages d'Or et d'Argent.
8vo. 136 pp. Paris, 1860.
- AMALIO Mining Company of Clear Creek County, Colorado. Prospectus, Act of Incorporation, &c. Vol. XXXII., Pamphlets. Octavo series. 8vo. 32 pp. New-York, 1866.
- AMATEUR Mechanic's Workshop, (The.)
8vo. 148 pp. London, 1870.
- AMELUNG, J. A. Abhandlung über der Wasserbau an den Schiffbaren Flüssen des Groszherzogthums Hessen als Beiträge zur Wasserbankunde. 8vo. 222 pp. Darmstadt, 1845.
- AMERICAN Association for the Advancement of Science. See, under *Journals*, Proceedings of the.
- Bureau of Mines Publications. A Geological and Agricultural Survey of 100 miles West of Omaha. Vol. XV., Pamphlets. Octavo series. 8vo. 44 pp. New-York, 1866.
- Memoirs: 1. Our Mineral Interests. 2. Guide for the Puddling of Iron and Steel, by Ed. Urbin. Trans. by T. Eggleston, Jr. 3. On Bessemer Steel, by Adolph Schmidt. Vol. III., Pamphlets. Quarto series. 4to. 30 pp. New-York, 1866.
- On the Rock-Salt Deposit of Petit Anse, La. Vol. III., Pamphlets. Quarto series. 4to. 5 pp. New-York, 1867.
- Statement of the objects of the American Bureau of Mines, with list of officers, &c. 8vo. 14 pp. New-York.
- Chemist. See under *Journals*.
- Exchange and Review. See under *Journals*.
- Gas Light Journal; and American Gas Light Journal and Chemical Repertory. See under *Journals*.
- Institute; and American Institute of Mining Engineers. See, under *Journals*, Transactions of the.
- Iron and Steel Association. See under *Journals*.

- AMERICAN JOURNAL of Mining, Milling, Oil Boring, &c. *See under Journals.*
- Journal of Science; and American Journal of Science and Art. *See under Journals.*
- Mechanic's Workshop, (The.) 8vo. 148 pp. London. 1870.
- Medical and Philosophical Register. *See under Journals.*
- Mining Index. *See under Journals.*
- Museum of Natural History. *See under Journals.*
- Ozone Co. Articles of Incorporation; with some Remarks on Ozone. Vol. XVI., Pamphlets. Octavo series.
- Public Health Association. *See, under Journals, Reports of the.*
- Rail-Road Journal. *See under Journals.*
- Repertory. *See under Journals.*
- Year Book and National Register. *See under Journals.*
- ANDERSON, F. Bestämning af Planeten (92) Udenas bana, grundad på observationer under trenne oppositioner. Vol. IV., Pamphlets. Quarto series. 4to. 22 pp. 1870.
- T. Elements of Agricultural Chemistry. 8vo. 299 pp. Edinburgh, 1860.
- AN HISTORICAL Notice of the Essex Institute, with the Act of Incorporation, Constitution and By-Laws. Pamphlet. 8vo. Salem, 1866.
- ANLEITUNG zur Anfertigung der Vermögens—und Ertrags—Berechnungen bei der Bergwerks—Hütten—und Salinen Verwaltung. 8vo. 56 pp. Berlin, 1866.
- zur Ausstellung der Etats und Oekonomie pläne der Bergwerks—Huetten—und Salinen Verwaltung von 15 December, 1866. 8vo. 40 pp. Berlin, 1866.
- ANNALEN der Chemie und Pharmacie. *See, under Journals, Annalen der Pharmacie.*
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- of the Dudley Observatory. *See under Journals.*
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- ANNUAL of Scientific Discovery. *See under Journals.*
- Reports of Departments of Government, of Public Officers, of Societies, &c. *See, under proper title, under Journals.*
- ANTHON, Charles. A Classical Dictionary. 4to. 1449 pp. New-York, 1855.

- ANTISELL, T. Address, introductory to the Course of Lectures in the Chemical Department of Vermont Medical College, delivered before the Class of Session of 1854. Vol. XXVIII., Pamphlets. Octavo series. 8vo. Woodstock, 1854.
- A Hand-Book of the Useful Arts. 12mo. 692 pp. New-York, 1852.
- ANSIAUX, L., and Maison, L. *Traité pratique de la fabrication du fer et de l'acier puddlé.* 8vo. 282 pp., XXVIII. plates. Paris, 1865.
- APPLETON, D. & Co.'s Dictionary of Machines, Mechanics, Engine Work and Engineering. 2 vols. 8vo. New-York, 1852.
- ARAGO, Francois. *Oeuvres Completes de.*
Notices Biographiques. 3 vols. 8vo. Paris, 1854-1855.
Notices Scientifiques. Vol. 1. 8vo. Paris, 1854.
Astronomie Populaire. 2 vols. 8vo. Paris, 1854.
- Popular Lectures on Astronomy. With Additions by Dionysius Lardner. Vol. VI., Pamphlets. Octavo series. 8vo. 95 pp. New-York, 1848.
- ARCHIV für Bergbau und Huettenwesen. *See under Journals.*
- für Mikroskopische Anatomie. *See under Journals.*
- ARGELANDER, Fr. *Neue Uranometrie.* 8vo. 119 pp.; Atlas, XVII. plates. Berlin, 1843.
- ARMENGAUD, Sr. The Practical Draughtman's Book of Industrial Design, and Machinist's and Engineer's Course of Mechanical Engineering and Architectural Drawing. 4to. 200 pp.; IV. plates. Philadelphia, 1870.
- *Traité des Moteurs Hydrauliques.* 2 vols. 4 to. text; Atlas, XXI. plates. Paris, 1858.
- ASCHERSON, Fred. *Deutscher Universitäts—Kalender für das Sommer—Semestre, 1873.* II. Thiel—Die Universitäten im deutschen Reich Oestterreich, in der Schweiz und den russischen Cestseeprovinzen. 12mo. 173 pp. Berlin, 1873.
- A SERIES of Charts of the Freiburg Mining District, showing the location of Mines, the direction of lodes, &c. 5 charts.
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- A SUMMARY of Statistics relating to Mining for 1867. (In Russian.) 8vo. 363 pp. St. Petersburg, 1867.
- ATKINSON, E. *See Ganot.*
- ATOMGEWICHTS Tabellen. Besonderer Abdruck aus Berzelius, Lehrbuch der Chemie. Vol. XXVII., Pamphlets. Octavo series. 8vo. 31 pp. 1845.
- ATTFIELD, J. Chemistry. General, Medical, and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia. From the English edition. 12mo. 552 pp. Philadelphia, 1871.

- AUBEL, C. Das Raschettesche System der Patent,—Normal und Universal—Schachtofen. 8vo. 62 pp. Leipzig, 1863.
- AUBINEAU. Traité Complet et Pratique de la Construction des Escaliers. Atlas, XXX. plates. 12mo. 90 pp. Paris.
- AUERBACH, G. Das Anthracene und Seine Derivate. 8vo. 164 pp. Berlin, 1873.
- AUSKUNSTERTHEILUNG über Neu-Zeeland. Zum Gebrauch für Auswanderer. Pamphlet. 12mo. London, 1873.

B.

- BACH, H. Die Theorie der Bergzeichnung in Verbindung mit Geognosie, oder Anleitung zur Bearbeitung und zum Richtigen Verständnisse Topographisch-Geognostischer Karten. 4to. 72 pp., XXIII. plates. Stuttgart, 1853.
- BACHE, A. D. Abstract of Results of a Magnetic Survey of Pennsylvania and parts of adjacent States, in 1840 and 1841, with some additional results of 1843 and 1862. Vol. V., Pamphlets. Octavo series. 8vo. 19 pp., 1 map. 1863.
- A Portfolio of VIII. Maps and Charts, illustrating the Isthmus of Tehuantepec. New-York, 1852.
- Discussion of the Magnetic and Meteorological Observations made at the Girard College Observatory, Philadelphia. In two sections. *Smithsonian Contrib.* Section I., comprising parts 1, 2, 3. Pamphlet. 4to.
- Experiments Relating to the Alleged Influence of Color on the Radiation of Non-Luminous Heat. Vol. V., Pamphlets. Octavo series. 8vo. 13 pp.
- Notes and Diagrams illustrative of the Directions of the Forces acting at and near the surface of the Earth, in different parts of the Brunswick Tornado of June 19th, 1835. Vol. I., Pamphlets. Quarto series. 4to. 12 pp., II. diagrams. 1835.
- On the Diurnal Variation of the Horizontal Needle. Vol. IV., Pamphlets. Quarto series. 4to. 21 pp., III. plates. Philadelphia, 1833.
- See, also, United States Coast Survey Reports.
- and Courtenay, E. H. On the Relative Horizontal Intensities of Terrestrial Magnetism at several places in the United States; with the Investigation of Corrections for Temperature, and Comparisons of the Methods of Oscillation in Full and in Rarefied Air. Vol. I., Pamphlets. Quarto series. 4to. 31 pp. 1836.
- See, also, under U. S. Coast Survey Reports.
- F. See Wood, G. B., and Bache, F.
- BACHELDER, Samuel. See Hayes, John L.
- BACKLUND, A. V. Nagro satser om plana algebraiska Kurvors Normaler. Vol. X., Pamphlets. Quarto series. 4to. 38 pp.
- BACON, F. W. A Treatise on the Richards' Steam Engine Indicator. 12mo. 155 pp. New-York, 1869.

- BEAR, W. Das Eisen—Seine Geschichte, Gewinnung und Bearbeitung. 12mo. 360 pp. Leipsig.
- BAILEY, J. W. Chemical Notes on Gunpowder and its materials. Selected for the use of the U. S. Cadets. Vol. III., Pamphlets. Quarto series. 4to. 14 pp. 1838.
- BAILY, F., and Filipowski, H. The Doctrine of Interest Annuities and Assurances. 2 vols. 8vo. London, 1864 to 1866.
- BAIRD, Spencer F. Catalogue of North American Birds. *Smith. Misc. Coll.* 8vo. 32 pp. Washington, 1859.
- Review of American Birds in the Museum of the Smithsonian Institution. Part I. *Smith. Misc. Coll.* 8vo. 478 pp. Washington, 1864–1872.
- See, also, United States and Mexican Boundary Survey. Parts II., III.; also under Whitney, J. D.
- S. F., and Girard, C. Catalogue of North American Reptiles. Part I., Serpents. *Smith. Misc. Coll.* 8vo. 172 pp. Washington, 1853.
- BALDWIN Locomotive Works. Illustrated Catalogue of. 4to. 134 pp. Philadelphia, 1872.
- BALLING, C. A. M. Die Eisenindustrie Böhmens. 8vo. 108 pp. Vienna, 1868.
- Die Probirkunde des Eisens und der Brennmaterialien. 8vo. 64 pp. Prag, 1868.
- Zwei Abhandlungen über einige der wichtigsten Theile des Eisen-Hüttenwesens. 4to. 40 pp. Prag, 1829.
- BANKS, N. P. See Exposition Universelle de Paris en 1867.
- BANNAN, B. See Daddow, S. H., and Bannan, B.
- BARKER, George F. A Text book of Elementary Chemistry, Theoretical and Inorganic. 12mo. 342 pp. New-Haven, 1870.
- The Forces of Nature. An Address delivered before the Chemical Society of Union College, July 22, 1863. Vol. v., Pamphlets. Octavo series. 8vo. 45 pp. Albany, 1863.
- BARLET, C. H. Tenue des Lignes appliquée à la comptabilité des Mines de Houille, des Hauts Fourneaux et des Usines à Fer. 8vo. 217 pp. Paris, 1861.
- BARLOW, Peter. A Treatise on the Strength of Materials. With several appendices. The whole arranged by William Humber. 8vo. 396 pp., XVI. plates. London, 1867.
- BARNARD, F. A. P. Address delivered before the American Association for the Advancement of Science, at the Chicago Meeting, August, 1868. Pamphlet. 8vo. Salem, Mass. 1869.
- Modern Industrial Progress, and the Influences Accelerating its March. An Address delivered before the Am. Inst. of N. Y., at its forty-first annual exhibition. Vol. XVIII., Pamphlets. Octavo series. 8vo. 40 pp. New-York, 1872.
- Report on Machinery and Processes of the Industrial Arts and Apparatus of the Exact Sciences. Paris Universal Exposition, 1867. 8vo. 669 pp., VII. plates. New-York, 1869.

- BARNARD, F. A. P. The Metric System of Weights and Measures. *From the Proceedings of the University Convocation held at Albany, N. Y., August, 1871.* 8vo. 106 pp.
- The Metric System of Weights and Measures. 8vo. 194 pp. New-York, 1872.
- Report on the Principles which should govern the Tolerance of Deviations from Standard Weight of Coin Weighed in Parcels; made to the Secretary of the Treasury of the United States, at the request of the Commission of 1872, for the Scrutiny of the Coinage. Pamphlets. 8vo. Washington, 1872.
- J. G. Report on the Fabrication of Iron for Defensive Purposes. *Professional Papers of the Corps of Engineers of the United States Army, No. 21.* 4to. 230 pp. Washington, 1870.
- Supplement to above. 4to. 51 pp. Washington, 1872.
- BARNES, J. K. General Meteorological Instructions. Vol. VI., Pamphlets. Octavo series. 8vo. Washington, 1868.
- BARRANDE, Joachim. Céphalopodes Siluriens de la Bohême. Introduction. Vol. XXI., Pamphlets. Octavo series. 8vo. 48 pp. Paris, 1867.
- Crustacés Divers et Poissons des Dépôts Siluriens de la Bohême. 8vo. 127 pp. Paris, 1872.
- Ptéropodes Siluriens de la Bohême. Introduction. Vol. XXI., Pamphlets. Octavo series. 16 pp. Paris, 1867.
- I. Rapparition du Genre *Arethusina* Barr. II. Faune Silurien des Environs de Hof, en Bavière. Vol. XXI., Pamphlets. Octavo series.
- BARRAULT. See Flachet, E.
- BARTHOLOMEW, John. A Descriptive Hand Atlas of the World. 4to. 275 pp., LVII. plates. Philadelphia, 1873.
- BARTLETT, W. H. C. On Rifled Guns. 4to. 31 pp.
- BARY, E. Nouveaux Problèmes de Physique. 8vo. 368 pp. Paris, 1838.
- BAUER, Alexander, and Hinterberger, F. Lehrbuch der Chemischen Technik. 8vo. 574 pp. Vienna, 1859.
- II. Kurze Anleitung zur Eisenhüttenkunde. 24mo. 186 pp. Sonderhausen, 1819.
- BAUERMAN, Henry. A Descriptive Catalogue of the Geological, Mining and Metallurgical Models in the Museum of Practical Geology. 12mo. 199 pp. London, 1865.
- A Treatise on the Metallurgy of Iron. 12mo. 399 pp. London, 1868.
- BAUERNFRIND, C. M. Elemente der Vermessungskunde. 8vo. 878 pp. Stuttgart, 1869.
- Elemente der Vermessungskunde. 2 vols. 8vo. Stuttgart, 1873.
- BAYERISCHEN Akademie der Wissenschaften. See, under Journals, Abhandlungen der Königlichen.
- BEALE, Lionel S. How to Work with the Microscope. Third edition. 12mo. 272 pp. Philadelphia, 1865.

- BEARD, George M. Stimulants and Narcotics, Medically, Philosophically and Morally Considered.
Pamphlet. 12mo. New-York, 1871.
- BECK, Lewis C. See Natural History of the State of New-York, part III., Mineralogy.
—— R. and J. Illustrated Catalogue of Scientific Instruments. *Presentation copy.* 8vo. 141 pp. London, 1865.
- BECKWITH, S. F. and A. Reports on Béton—Coignet, Asphalt and Bitumen. 8vo. 52 pp. Washington, 1868.
- BECQUEREL, A. C. and E. Traité d'Électricité et de Magnétisme. 3 vols. 8vo. Paris, 1856.
- BEECHER, Prof. See Washington Astronomical and Meteorological Observations for 1871.
- BEEKMAN, James W. Centenary Address delivered before the Society of the New-York Hospital, Monday, July 24, 1871. 8vo. 44 pp. New-York, 1871.
- Appendix to above, containing some Short Hints on the Structure and Economy of Hospitals, particularly applied to Military Ones; with the General Means of Preserving Health in the Army. 20 pp.
- The Founders of New-York. An Address delivered before the Saint Nicholas Society of the City of New-York, Saturday, December 4, 1869. 8vo. 36 pp. New-York, 1869.
- BEER, A. H. Einleitung in die Höhre Optik. 8vo. 480 pp. Braunschweig, 1853.
- Erdbohrkunde. Ein Abschnitt aus dem Aufschluss und Ausrichtungen—Arbeiten der allgemeinen Bergbaukunde von August Heinrich Beer. 8vo. 399 pp. Prag, 1858.
- Lehrbuch der Markscheide-Kunst, für Bergschulen und Selbstunterricht. 8vo. 335 pp. Prag, 1856.
- BEHRENS, H. Mikroskopische Untersuchungen über die Opale. 8vo. 38 pp., II. plates. 1871.
- BEHSE, W. H. Sammel—Mappe für Bau—Entwürfe. (*Imperfect.*) Folio. 1866–1869.
- BEIL, J. A. Technologisches Wörterbuch der Deutschen, Französischen, und Englischen Sprache. 8vo. 678 pp. Weisbaden, 1853.
- BEINERT and Gorppert. Abhandlungen über die Beschaffenheit und Verhältnisse der fossilen Flora. 4to. 72 pp. Leiden, 1849.
- BEITRAGE zur Geognostischen Kenntniss des Erzgebirges. Herausgegeben durch die Hierzu Bestellten Commission. Hefts. I., 1865; II., 1867; III., 1869. 8vo. Freiberg.
- BELANGER, J. B. Résumé des Leçons de Geometrie Analytique et de Calcul Infinitesimal. 12mo. 295 pp. Paris, 1859.
- BELIDOR, B. F. de. La Science des Ingenieurs dans la Conduite des Travaux de Fortification et d'Architecture Civile. 4to. 6 vols. bound in one. Paris, 1729.
- BELL, J. Lowthian. Chemical Phenomena of Iron Smelting. 8vo. 435 pp. London, 1872.

- BELL, J. Lowthian. Ueber die Entwicklung und Verwendung der Wärme. Frei übersetzt mit einiger Beimerkungen begleitet von P. Tunner. 8vo. 111 pp. Leipsig, 1870.
- BELVILLE, J. H. Manual of the Mercurial and Aneroid Barometers. Vol. X., Pamphlets. Duodecimo series. 12mo. 53 pp. London, 1849.
- BELLY, Felix. *See* Gamond and Belly.
- BENET, S. V. Electro-Ballistic Machines, and the Schultz Chronoscope. 4to. 47 pp. New-York, 1866.
- BENTHAM, G. An Address read at the Annual Meeting of the Linnæan Society, May 24, 1867. Vol. XXVI., Pamphlets. Octavo series. 8vo. 24 pp. London, 1867.
- BENTZ, L. Elements of Agriculture. Pamphlet. 12mo. Philadelphia, 1852.
- BEOBACHTUNGEN. Versuche und Einführungen den K. K. Kunst-Bau-Berg-und-Hüttenwesens-Beamten im Gebieth des Berg und Huttenmännischen Maschinen und Bauwesens. 3 vols. text; 3 vols. plates. 1851-1853.
- BERG, C. F. v. Anleitung zum Verkohlen des Holzes. 12mo. 278 pp. Darmstadt, 1860.
- BERGBANKUNDE. 2 vols. 4to. Leipsig, 1789, 1790.
- BERGH, C. A. Iakttagelser öfver Djurlifet i Kattegat och Skagerrack, gjorda under Kanobäten "Ingegerds" Expedition sommare, 1870. Vol. VII., Pamphlets. Quarto series. 4to. 37 pp. 1870.
- BERGHAUS, H. Physikalischer Atlas. 2 vols. 4to. Gotha, 1852.
- BERGMAN, Torbern. Manuel du Mineralogiste ou Sciagraphie du Règne Mineral. 2 vols. 8vo. Paris, 1784.
- Opuscules Chymiques et Physiques. 2 vols. 8vo. Dijon, 1780, 1785.
- BERG und Huettenmännisch Jahrbuch.
- und Huettenmännisch Zeitung. } *See under Journals.*
- BERGWERKS Betrieb.
- BERICHTE der Deutschen Chemischen Gesellschaft.
- über die Allgemeine Ausstellung zu Paris, &c. *See Exposition Universelle de Paris, en 1867.*
- über die Fortschritte der Eisenhütten Technik. } *See under Journals.*
- über die Mittheilungen von Freunden der Wissenschaften.
- über die Thätigkeit der Allgemeinen sektion der Schlesischen Gesellschaft, im Jahre, 1869. 4to. 16 pp. 1869.
- über die Zweite Allgemeine Versammlung von Berg-und Huttenmännern zu Wien. (21 bis 28 September, 1861.) 8vo. 123 pp. Vienna, 1862.
- BERNSTEIN, H. A. Beiträge zur Nähren Kenntniss der Gattung *Collocalia* Gr. (*Cypselus Esculentus et Nidificus.*) Vol. VI., Pamphlets. Quarto series. 4to. 1856.
- BERTHIER, P. Handbuch der metallurgisch Analytische Chemie. 2 vols. 8vo. Leipsig, 1835-1836.
- Traité des essais par la voie sèche. 2 vols. 8vo. Paris, 1834.

- BERTHOLLET, C. L. Elements de l'Art de la Teinture.
2 vols. 12mo. Paris, 1791.
- Researches into the Laws of Chemical Affinity. Translated from the French by M. Farrell.
12mo. 212 pp. Baltimore, 1809.
- BERTRAND, Joseph. Traité d'Arithmétique.
12mo. 254 pp. Paris, 1849.
- Traité Élémentaire d'Algèbre.
12mo. 560 pp. Paris, 1851.
- BERZELIUS, J. J. An Attempt to Establish a System of Mineralogy. Translated from the Swedish, by John Black.
8vo. 144 pp. London, 1814.
- Der Anwendung des Löthrohr.
8vo. 284 pp. Hamburg, 1844.
- Lehrbuch der Chemie. 5 vols. 8vo. Leipsig, 1843, 1848.
- Neues System der Mineralogie.
8vo. 14 pp. Nurnberg, 1816.
- Nouveau Système de Minéralogie.
12mo. 314 pp. Paris, 1849.
- The use of the Blowpipe in Chemical Analysis.
8vo. 343 pp. London, 1822.
- Traité de Chimie. Traduit par A. J. L. Jourdan.
8 vols. 8vo. Paris, 1829–1833.
- Traite de Chimie Minérale, Vegetale et Animale. Seconde edition. Traduit par MM. Esslinger et Hoefer.
6 vols. 8vo. Paris, 1845–1850.
- Jahresbericht. *See, under Journals*, Jahresberichte über die Fortschritte der physischen Wissenschaften.
- BESCHERELLE aîné. Dictionnaire Universel de la Langue Française.
2 vols. 4to. Paris, 1846–1847.
- BESCHREIBUNG der industriellen Unternehmungen der K. K. priv. oesterr. Staats-Eisenbahn Gesellschaft.
4to. 112 pp. Vienna, 1873.
- der Kolonie Victoria, ihre Geographie, Politik, Land u. Hirtenwirthschaft und ihren Bergbau betreffend.
Pamphlet. 12mo. 1873.
- BESSEMER, Henry. On a New System of Manufacturing Sugar from the Cane.
8vo. 61 pp. 1852.
- BENDANT, F. S. Traité Élémentaire de Mineralogie. Second edition.
2 vols. 8vo. Paris, 1832.
- BEUST, F. C. F. Die Eisenerzlagerstätten des obern Erzgebirges, &c.
8vo. 36 pp. Freiberg, 1856.
- BEUTÉ, E. Études sur le Peloponnèse. 8vo. 481 pp. Paris, 1855.
- BIBLIOTHECA Historico Naturalis. *See under Journals*.
- Mechanica Technologia. *See under Journals*.
- rerum metallicarum. Verzeichniss der bis mitte 1856 in Deutschland über Bergbau, Hütten-und Salinenkunde und verwandte zweige erscheinen Bücher, Karten und Ansichten.
16mo. 110 pp. Eisleben, 1857.
- BIBRA, E. F. v. Die Bronzen und Kupferlegirungen der Alten und Altesten Volker.
8vo. 210 pp. Erlangen, 1869.

- BIDRAG till Svriges Officiela Statistik. Bergshauteringen. Commerce Collegii. Underdaniga Berattelse for år 1873.
4to. 32 pp. Stockholm, 1874.
- BIGELOW, ERASTUS B. An Address upon the Wool Industry of the United States, delivered at the Exhibition of the American Institute in the City of New-York, October 5, 1869.
8vo. 22 pp. New-York, 1869.
- BILLINGS, E. Palæozoic Fossils. Vol. II., Part I. *Geol. Survey of Canada*. 8vo. 144 pp., X. plates. Montreal, 1874.
- BINKHORST, J. T. B. van den. Esquisse Géologique et Paleontologique des Couches Cretacées du Limbourg et plus spécialement de la Craie Tuffeau.
8vo. 268 pp., VI. plates. Maastricht, 1859.
- BINNEY, W. G. Bibliography of North American Conchology previous to 1860. *Smith. Misc. Coll.* Part 1. American Authors. 650 pp. 1863. Part 2. Foreign Authors. 306 pp. 1864.
8vo. Washington.
- BINNEY, W. G., and Bland, T. Land and Fresh Water Shells of North America. *Smith. Misc. Coll.*
Part I. Pulmonata Geophila, 316 pp., 1869.
Part. II. Pulmonata Limnophila, 120 pp., 1865.
8vo. Washington.
- BIOT, J. B. Précis Élémentaire de Physique Expérimentale.
2 vols. 8vo. Paris, 1817.
- BIRD, Golding. Urinary Deposits. Their Diagnosis, Pathology and Therapeutical Indications. Edited by E. L. Birkett.
8vo. 382 pp. Philadelphia, 1863.
- BISCHOF, Gustav. Elements of Chemical and Physical Geology. Translated from the Manuscript of the Author, by B. H. Paul and J. Drummond.
3 vols. 8vo. London, 1854, 1855, 1859.
- Lehrbuch der Chemischen und Physikalischen Geologie.
3 vols. 8vo. Bonn, 1847, 1854.
- Lehrbuch der Chemischen und Physikalischen Geologie.
3 vols. 8vo. With Supplemental Volume. Bonn, 1864–1870.
- Magdesprunger Hohofenprodukte.
8vo. 16 pp. Quedlinburg, 1853.
- II. Die indirecte, aber höchste Nutzung der rohen Brennmaterialien.
8vo. 68 pp. Quedlinburg, 1856.
- BISCHOFF, Gottlieb Wilhelm. Lehrbuch der Botanik. "Heidelberger Naturgeschichte."
5 vols. 8vo. Stuttgart, 1834–1840.
- BISHOP, J. L. A History of American Manufactures from 1608 to 1860.
3 vols. 8vo. Philadelphia, 1866.
- BLACK, Joseph. Lectures on the Elements of Chemistry, delivered in the University of Edinburgh.
3 vols. 8vo. Philadelphia, 1806–1807.
- BLACK HAWK Gold Mining Company. Prospectus, &c. Vol. XXXII., Pamphlets. Octavo series. 8vo. 15 pp., I. map. New-York.

- BLAKE, Eli W., Jr. On a Method of Producing, by the Electric Spark, Figures Similar to those of Lichtenberg. Vol. V., Pamphlets. Octavo series. 8vo. 1870.
- John. *See* Berzelius, J. J.
- BLAINVILLE, H. D. de. Mémoire sur les Belemnites. 4to. 135 pp., V. plates. Paris, 1827.
- BLAKE, William P. *See* Exposition Universelle de Paris, en 1867.
- BLANCHET, A. Éléments de Geometrie, par A. M. Legendre. 8vo. 280 pp. Paris, 1859.
- BLAND, T. Remarks on the Distribution of the Inoperculated Land Shells which inhabit the continent of America and the West Indies. Vol. XXVI., Pamphlets. Octavo series. 8vo.
- Remarks on the Origin and Distribution of the Operculated Land Shells which inhabit the Continent of America and the West Indies, with a Catalogue of the American species. Vol. XXVI., Pamphlets. Octavo series. 8vo. 20 pp. 1866.
- *See* Binney, W. G.
- BLENKARN, J. Practical Architectural and Engineering Specifications. 8vo. 416 pp. London, 1865.
- BLOMSTRAND, C. W. Den nyare Atomtheorien fran electro kemisk Standpunkt. Vol. V., Pamphlets. Quarto series. 4to.
- Die Chemie der Jetztzeit. 4to. 417 pp. Heidelberg, 1869.
- Om Tantalmetallerna och deras nativa foreningar. Vol. IX., Pamphlets. Quarto series. 4to.
- BLOXAM. *See* Abel and Bloxam.
- BLUM, J. R. Die Mineralien nach Krystallsystemen geordnet. 8vo. 32 pp. Heidelberg, 1866.
- Die Pseudomorphosen des Mineralreiches mit Erste u Zweite Nachtragen. 12mo. 378. 213. 140 pp. Stuttgart, 1843.
- Dritte Nachtrage zu Den Pseudomorphosen des Mineralreichs. 12mo. 294 pp. Erlangen, 1863.
- Handbuch der Lithologie oder Gesteinlehre. 8vo. 356 pp. Erlangen, 1860.
- Lehrbuch der Mineralogie. (Oryktognosie.) Erste Abtheilung. 8vo. Stuttgart, 1873.
- Lehrbuch der Oryktognosie. 8vo. 509 pp. Stuttgart, 1833.
- Lithurgik oder Mineralien und Felsarten. 8vo. 501 pp. Stuttgart, 1840.
- BLUMHOF, J. G. L. Encyclopädie des Eisenhüttenkunde. 4 vols. 12mo. Giessen, 1816-1821.
- BOBERT, C. W. Der geschwinde und richtig rechnende Markscheider. 4to. 93 pp. Quedlinburg, 1858.
- BOCKER, Dr. Untersuchungen über Die Wirkung des Wassers. Vol. III., Pamphlets. Quarto series. 4to. 100 pp. 1853.
- The same as above. 2 Pamphlets. 8vo. Berlin, 1866.

- BODEMAN, Th., and Kerl, Bruno. *Anleitung zur Berg-und Heuttenmännischen Probirkund.* 8vo. 580 pp. Clausthal, 1857.
- *A Treatise on the Assaying of Lead, Copper, Silver, Gold and Mercury.* Translated by W. Goodyear. 8vo. 214 pp. New-York, 1865.
- BOEDECKER, C. *Die Zusammensetzung der Natürlichen Silicate.* 8vo. 156 pp. Göttingen, 1857.
- BOLLEY, P. A. *Handbuch der Chemischen Technologie.* Band VII. *Die metallurgie.* Parts 1, 2, 3. 8vo. 608 pp. Braunschweig, 1868. Band VIII. *Bearbeitung der Metalle.* Part 2. 8vo. 81 pp., I. plate. Braunschweig, 1874.
- *See, also, Paul, Benjamin H.*
- BOLLEY, P., et Kopp, E. *Traité des Matieres Colorantes Artificielles dérivées du Goudron de Houille, Traduit de L'Allemand et Augmenté des travaux les plus récents par le Dr. L. Gautier.* 8vo. 444 pp. Paris, 1874.
- *A Manual of Technical Analyses.* 12mo. 426 pp. London, 1857.
- BOLTON, H. C. *Index to the Literature of Uranium.* Vol. XXIX., Pamphlets. Octavo series. 8vo. New-York, 1870.
- *On the Fluorine Compounds of Uranium. Inaugural Dissertation.* Vol. XXVII., Pamphlets. Octavo series. 8vo. Berlin, 1866.
- *Outlines of a Bibliography of the History of Chemistry.* Vol. XXXI., Pamphlets. Octavo series. 8vo. 1874.
- BOMAN, L. E. *Das Bessemern in Schweden.* 8vo. 47 pp. Leipsig, 1864.
- BONE, J. H. A. *Petroleum and Petroleum Wells. What Petroleum is, Where it is found, and What it is used for. Where to Sink Petroleum Wells, and how to sink them. With a Complete Guide Book of Pennsylvania, West Virginia, Kentucky and Ohio.* 12mo. 153 pp. Philadelphia, 1865.
- BONPLAND, A. *See Humboldt, Alexander. Voyage aux Regions Equinoxiales.*
- BOOTH, J. C., and C. Morfit. *On Recent Improvements in the Chemical Arts.* 8vo. 216 pp. Washington, 1852.
- J. C. *Memoir of the Geological Survey of Delaware.* 8vo. 188 pp. Dover, 1841.
- BORCHERS, E. *Anwendung eines Kraftigen Magnets zur Ermitte lung der Durchslagrichtung zweier Gegenörter.* Pamphlet. 8vo. Clausthal, 1846.
- *Die Practische Markscheidekunst.* 3vo. 308 pp. Hanover, 1870.
- BORN, J. E. von. *Ueber das Anquicken der Gold-und Silberhältigen Erze, &c.* 4to. 227 pp. Vienna, 1786.
- BORN, Jr., and Frebra, F. W. H. v. *Begbaukunde.* 2 vols. 4to. Leipsig, 1789, 1790.
- BOSC, Ernest. *Traité complet de la Tourbe.* 8vo. 242 pp. Paris, 1870.

- BOSSUET, F. *Traité de Perspective Linéaire.*
Vol. I. 8vo. 160 pp. text; Atlas, XXVIII. plates. Brussels.
BOSTON Journal of Chemistry. *See under Journals.*
- Milling and Manufacturing Co. Report of the Consulting
Engineer for 1866. Vol. VII., Pamphlets. Octavo series.
8vo. 26 pp. Boston, 1866.
- BONÉ, A. *Essai Géologique sur L'Écosse.*
8vo. 520 pp. Paris, 1820.
- BOUHY, V. *De La Houille et en particulier des Diverses Espèces
de Houilles Exploitées au Couchant de Mons, en Hainaut,
(Belgique.)* 8vo. 399 pp. Mons, 1855.
- BOURNE, John. *A Treatise on the Steam Engine.*
4to. 258 pp., XXXIII. plates. London, 1853.
- BOWDITCH, W. R. *The Analysis, Technical Valuation, Purification
and Use of Coal Gas.* 8vo. 300 pp. London, 1867.
- BOWMAN, J. E. *An Introduction to Practical Chemistry, including
Analysis.* Third American edition.
12mo. 333 pp. Philadelphia, 1864.
- *Practical Handbook of Medical Chemistry.* Edited by C.
L. Bloxam. 8vo. 351 pp. Philadelphia, 1863.
- Box, Thomas. *A Practical Treatise on Mill-Gearing, Wheels,
Shafts, Riggers, &c., for the use of students.*
8vo. 84 pp. London, 1869.
- BRANDE, W. T. *Lectures on the Arts connected with Organic
Chemistry.* 16mo. 382 pp. London, 1854.
- and A. S. Taylor. *Chemistry.*
8vo. 696 pp. Philadelphia, 1863.
- BRAND, C. P. *Éléments pratiques d'Exploitation.*
8vo. 592 pp., XXXII. plates. Paris, 1829.
- *Minéralogie Appliquée aux Arts.*
3 vols. 12mo. Paris, 1821.
- BREED, D. *Bismæthyl; a new Organic Radical containing Bis-
muth.* Vol. XXIX., Pamphlets. Octavo series. 8vo. 1852.
- BREISLAK, De Scipion. *Atlas géologiques ou Vues d'Amas de
Colonnes Basaltiques.* 4to. LV. plates.
- BREITHAUPT, A. *Die Paragenesis der Mineralien.*
8vo. 276 pp. Freiberg, 1849.
- *Vollständiges Handbuch der Mineralogie.*
3 vols. 8vo. Dresden, 1836, 1841, 1847.
- BRETON, De Champ P. *Traité du Nivellement Comprennant la
Theoretique et la Pratique du Nivellement Ordinaire et des
Nivellements Expéditifs.* 8vo. 299 pp. Paris, 1848.
- BREWER, C. E. *Katechismus der Naturlehre.*
12mo. 208 pp. Leipsig, 1866.
- BREWSTER, David. *A Treatise on Optics, with an Appendix by
A. D. Bache.* 8vo. 417 pp. Philadelphia, 1847.
- and Gladstone. *On the Lines of the Solar Spectrum.*
4to. London, 1860.
- BRISSON, J. *The Physical Principles of Chemistry.* Translated
from the French. 8vo. 424 pp. London, 1801.

- BRISTOW, H. W. A Glossary of Mineralogy. 12mo. 420 pp. London, 1861.
- BRITISH Almanac and Companion. } *See under*
 Association for the Advancement of Science. } *Journals.*
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- Photography. Parts I. and II. 1861–1867.
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- Preservation of Food. 46 pp. 1857.
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- 21 vols. 16mo. London.
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- BRITISH Patent Office. Specifications of Patents relating to—
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 - Making Wrought Iron Directly from the Ore, and Collecting and Condensing Oxides or other substances while Deoxidising Iron or other Ores. A. E. L. Belford, Patentee. 32 pp., IV. plates. 1854.
 - Manufacture of Iron. S. M. Banks, Patentee. 3 pp., I. plate. 1857.
 - Manufacture of Iron. T. Bottfield, Patentee. 4 pp. 1858.
 - Manufacture of Iron. A. M. Crane, Patentee. 6 pp., II. plates. 1857.
 - Manufacture of Iron and other Metals. H. Houldsworth, Patentee. 7 pp., II. plates. 1857.
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 - Manufacture of Iron. B. Thompson, Patentee. 4 pp., I. plate. 1857.
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 - Puddling Furnaces. Daniel Horton and George Horton, Patentees. 6 pp., III plates. 1806.

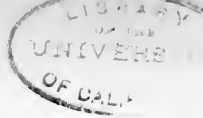
- BRONNE, M. J. Comparaison entre les Terrains Primaires de la Bretagne et Ceux de la Belgique. Vol. XIV., Pamphlets. Octavo series. 8vo. 47 pp.
- BROOKLYN Water Works and Sewers, (The.) A Descriptive Memoir. 2to. 160 pp., LIX. plates. New-York, 1867.
- BROOKS, H. S. A Report on the property of the Triunfo Silver Mining and Commercial Co. of Lower California. 4to. 80 pp. Philadelphia, 1866.
- Henry J. A Familiar Introduction to Crystallography. 12mo. 505 pp. London, 1823.
- J. Speech on the Tariff. 8vo. 30 pp. Washington, 1870.
- T. B. Reports of the Geological Survey of Michigan for the years 1869–1873. The Upper Peninsula. Text, 2 vols., imp. 8vo. Atlas, XXIII. plates. New-York, 1873.
- BROWNE, J. ROSS. See Reports of the Special Commissioners on the Mineral Resources of the United States west of the Rocky Mountains.
- BRUCKNER, William H. See Chynoweth, J. B.
- BRUNUS, C. Bestimmung der Langendifferenz zwischen Berlin und Lund auf telegraphischen Wege ausgeführt von dem Central bureau der Europäischen Gradmessung und der Sternwarte in Lund im Jahre, 1868. Vol. IV. Quarto series. 4to. 51 pp. Lunds, 1870.
- BRUNNOW, F. Tables of Victoria, computed with regard to the perturbations of Jupiter and Saturn. 4to. 17 tables. New-York, 1859.
- BRUSH, George J. Appendix to the Fifth Edition of Dana's Mineralogy. 8vo. 19 pp. New-York, 1872.
- Eighth Supplement to Dana's Mineralogy. Vol. XII., Pamphlets. Octavo series. 8vo. 1860.
- Ninth Supplement to Dana's Mineralogy. Vol. XII., Pamphlets. Octavo series. 8vo. 1861.
- Tenth Supplement to Dana's Mineralogy. Vol. XII., Pamphlets. Octavo series. 8vo. 1862.
- Manual of Determinative Mineralogy, with an Introduction on Blow-Pipe Analysis. 8vo. 104 pp. New-York, 1875.
- Mineralogical Notes. Vol. XII., Pamphlets. Octavo series. 8vo. 1858.
- On Amblygonite from Hebron, Maine. Vol. XII., Pamphlets. Octavo series. 8vo. 2 pp. 1862.
- On a Variety of Galena from Lebanon County, Pa. Vol. XII., Pamphlets. Octavo series. 8vo. 1863.
- On the Crystalline Form of the Hydrate of Magnesia from Texas in Pennsylvania. Vol. XII., Pamphlets. Octavo series. 8vo. 1861.
- BRUSSE. Cours de Mecanique-Appliquée, professé a L'École des Ponts et Chaussées.
 Première Partie—Resistance des Materiaux et Stabilité des Constructions.
 Deuxième Partie—Hydraulique. 2 vols. 8vo. Paris, 1859–1860.

- BRUSSE. Recherches Analytiques sur la Flexion et la Résistance des Pièces Courbes. 4to. 269 pp. Paris, 1854.
- BUCH, Leopold von. Physikalische Beschreibung der Canarischen Inseln. 4to. 407 pp. Berlin, 1825.
- BULLETIN—de l'Académie Imperiale des Sciences and various other Associations. *See under Journals under the appropriate heads.*
- BUFF, H., Kopp, H., and Zamminer, F. Lehrbuch der Physikalischen und Theoretischen Chemie. 8vo. 860 pp. Braunschweig, 1857.
- BUNSEN, R. Gasometrische Methoden. 24mo. 305 pp. Braunschweig, 1857.
- Gasometry. 8vo. 298 pp. London, 1857.
- Ueber Eine Volumetrische Methode von sehr Allgemeiner Anwendbarkeit. Vol. II., Pamphlets, Duodecimo series. 12mo. 48 pp., 1 plate. Heidelberg, 1854.
- BUNSEN and Roscoe. Photo-Chemical Researches. 4to. London, 1857.
- BURAT, Amédée. De la Houille, Traité Théorique et Pratique des Combustibles Minéraux. 8vo. 482 pp. Paris, 1851.
- Geologie Appliquée Traité du Gisement et de l'Exploitation des Utiles Minéraux. Première Partie. Geologie Pratique. Deuxième Partie. Exploitation des Mines. Quatrième édition. 2 vols. 8vo. 550, 540 pp., XXIX., XXXIII., plates. Paris, 1858, 1859.
- Geologie Appliquée. 2 vols. 8vo. Paris, 1870.
- Le Matériel des Houillères en France et en Belgique. 8vo. 519 pp. text, fol. XXXIII. plates. Paris, 1865.
- Memoire sur le Gisement de la Houille dans la Bassin de Saône-et-Loire. Vol. II., Pamphlets, Octavo series. 8vo. 77 pp., IV. plates. Paris, 1812.
- Mineralogie Appliquée. Description des Minéraux Employés dans les Industries Metallurgiques et Manufacturiers. 8vo. 476 pp. Paris, 1864.
- *See, also, under Journals, Les Houillères.*
- BURGH, N. P. The Indicator Diagram practically Considered. 8vo. 199 pp. London, 1869.
- The Slide Valve Practically Considered. 8vo. 121 pp. London, 1868.
- BURKART, Joseph. Aufenthalt und Reisen in Mexico in der Jahren, 1825 bis 1834. 2 vols. 12mo. Stuttgart, 1836.
- BURLEIGH Drill. Two Photographic Views of the. 4to.
- BURMEISTER, Hermann. Geschichte der Schöpfung Eine Darstellung des Entwicklungsganges der Erde und Ihrer Bewohner. 8vo. 605 pp. Leipzig, 1851.
- Geschichte der Schöpfung. 8vo. 664 pp. Leipzig, 1867.
- Reise nach Brasilien. 8vo. 608 pp. Berlin, 1853.
- BURN, R. S. The New Guide to Carpentry. General Framing, and Joinery, Theoretical and Practical. 4to. 364 pp., CLI. plates. Edinburgh, 1870.

- BUSCH, Adolph. Die Organization und Buchführung des Eisengieserei und Maschinenbau-Betriebes. 8vo. 182 pp. Leipsig, 1863.
- BURY, Aug. Traité de la Legislation des Mines, des Minères, des Usines et de Carrières en Belgique et en France ou Commentaire Theoretique et Pratique de la Loi de 21 Avril, 1810, et des Lois et Réglements qui s'y Rattachent. 2 vols. 8vo. Liège, 1859.
- BYRNE, Oliver. The Practical Metal-Worker's Assistant. 8vo. 652 pp. Philadelphia, 1864.
- J. N. L. The Complete Practical Brewer. 12mo. 199 pp. Philadelphia, 1869.
- BYRNE and Spon. A Dictionary of Engineering; Civil, Mechanical, Military and Naval; with Technical Terms in French, German, Italian and Spanish.
- | | |
|---------------------------|--------------------------------|
| Division I., A. to Bo. | Division V., Fo. to Hyde. |
| Division II., Bo. to Br. | Division VI., Hyd. to Lo. |
| Division III., Br. to Da. | Division VII., Lo. to Pump. |
| Division IV., Da. to F. | Division VIII., Pump. to Zinc. |
- 8 vols. 8vo. London, 1869-1874.

C.

- CAHOURS, Auguste. Leçons de Chimie Élémentaire. 2 vols. 12mo. Paris, 1855, 1856.
- CALDWELL, G. C. Agricultural Qualitative and Quantitative Chemical Analysis. 8vo. 307 pp. New-York, 1869.
- CALLET, F. Tables Portraitives de Logarithmes, revuës et corrigées, par M. Saigey. 8vo. 680 pp. Paris, 1795.
- CALLON, J. Cours professés a L'École des Mines de Paris. Première Partie. Cours de Machines. Tome I., Text and Atlas. Deuxième Partie. Cours D'Exploitation des Mines. Tomes I, II., Text and Atlas. 3 vols. 8vo. text; 3 Atlases. Paris, 1873.
- CALVOR, Hemming. Historische Nachricht von der Unter-und gesamten Ober-Harzischen Bergwerke. 4to. 254 pp. Braunschweig, 1765.
- CAMBESSY, Alph. Dictionnaire Minier et Metallurgique Allemand-Francaise. 16mo. 203 pp. Paris, 1868.
- CAPRON, Félicien. Nouveau Manuel Complet du Fabricant de Bleus et Carmins d'Indigo. 24mo. 76 pp. Paris, 1858.
- CANADIAN Naturalist and Geologist. *See under Journals.*
- CARNALL, R. von. Bergmännisches Taschen-Buch für alle Freunde der Bergwerke-Industrie, im Besondern derjenigen Oberschlesiens. 12mo. 257 pp. Breslau, 1844.
- CARNALL's Zeitschrift. *See under Journals.*
- CARNEGIE, Kloman & Co. A Series of Cuts of Iron Beams, Bars, T Angles, &c. 4to. 1873.



CARNOT, L. N. M. Mémoire sur la Relation qui existe entre les distances de cinq points quelconques pris dans l'espace, suivi d'un essai sur la Théorie des Transversales.

4to. 111 pp. Paris, 1866.

CARPENTER, Philip B. The Mollusks of Western North America. Embracing the Second Report made to the British Association on this subject, with other papers; reprinted by permission, with a general index. *Smith. Misc. Coll.*

8vo. Washington, 1872.

—— William B. Principles of Comparative Physiology. From the Fourth London edition.

8vo. 752 pp. Philadelphia, 1854.

—— The Microscope and its Revelations.

12mo. 778 pp. London. 1856.

—— The Microscope and its Revelations.

12mo. 796 pp. London, 1868.

CARTE über die Production, Consum und die Circulation des Mineral-Brennstoffes in Preussen während das Jahre, 1871. A chart.

CARUS, Carl Gustav. Ueber altgriechische Schödel aus Gräbern der Verschwundenen Alten Stadt Cuma in Unter-Italien.

4to. 11 pp. 1856.

CATALOGUE of Scientific Papers. See Royal Society's (The) Catalogue of Scientific Papers.

—— of the Library of the U. S. Naval Observatory, Washington, D. C.

4to. 24 pp. Washington, 1868.

CENSUS of the State of New-York, for 1865.

4to. 869 pp. Albany, 1867.

—— See, also, Hough, Franklyn B.

—— of the United States. See Walker, Francis B.

CENTENNIAL Exhibition, Philadelphia, 1876. Kelley, William D. Speech on the Pecuniary and Political Value of the Proposed International Exhibition, delivered in the House of Representatives, May 5, 1874.

Pamphlet. 8vo. Washington, 1874.

CENTENNIAL of Chemistry, held August 1, 1874, at Northumberland, Pa. Proceedings of the. *Reprinted from the August—September and December numbers of the American Chemist.*

4to. 209 pp. Philadelphia, 1875.

CHAMPAGNE, of What, How, and Where it is made.

Pamphlet. 8vo. Buffalo, 1856.

CHANDLER, Charles F. A Lecture on Water. Mineral Waters. *From the American Chemist, Vol. II.*, 1871.

4to. 6 pp. Philadelphia, 1871.

—— A Scheme for the Analysis of Iron Ore, for the use of the Students of the School of Mines.

—— Dangerous Kerosene. A Report to the Metropolitan Board of Health.

8vo. 8 pp. New-York, 1868.

—— Lecture on Water, delivered before the American Institute of the City of New-York, in the Academy of Music, January 20, 1871.

Pamphlet. 8vo. Albany, 1871

- CHANDLER, Charles F. *Miscellaneous Chemical Researches. An Inaugural Dissertation* to the Philosophical Faculty of the University of Göttingen. Vol. XXVII., Pamphlets. Octavo series. 8vo. 52 pp. Albany, 1857.
- *Report on Water for Locomotives and Boiler Incrustations.* Vol. IV., Pamphlets. Octavo series. 8vo. 35 pp. New-York, 1865.
- *Report upon the Sanitary Chemistry of Water, and Suggestions with Regard to the Selection of the Water Supply of Towns and Cities.* Pamphlet. 8vo. Cambridge, 1875.
- *Report on Petroleum as an Illuminator. From Report of Met. Board of Health,* 1870. Vol. XVI., Pamphlets. Octavo series. 8vo. 110 pp. New-York, 1871.
- *Report on the Waters of the Hudson River, together with an Analysis of the same, made to the Water Commissioners of the City of Albany.* Vol. XVII., Pamphlets. Octavo series. 8vo. 25 pp. Albany, 1872.
- *See, also, Elderhorst, William.*
- CHAPMAN, E. J. *Practical Mineralogy, or a Compendium of the Distinguishing Characteristics of Minerals.* 8vo. 192 pp. London, 1843.
- CHAPTAL, I. A. *Elements of Chemistry.* 3 vols. 8vo. London, 1791.
- *Chemistry Applied to Agriculture.* Translated from the Second French edition. 12mo. 365 pp. Boston, 1836.
- *Chimie Appliquée Aux Arts.* 4 vols. 8vo. Paris, 1807.
- CHATONEY et Rivot. *Considération sur les Matériaux employés dans les Constructions à la mer.* 8vo. 193 pp. Paris, 1856.
- CHEMICAL Gazette. } *See under Journals.*
- News. }
- Society. } *See, under Journals, Journal of the.*
- CHEMISCHES Central Blatt. } *See, under Journals, Pharmaceutisches Central Blatt.*
- CHEMISCH-Technisch Mittheilungen. }
- CHEMIST, The. }
- CHENU, Dr. *Encyclopédie D'Histoire Naturelle. Première Partie. Botanique.* Tomes I., II. 2 vols. 4to. Paris.
- CHEVALIER, Michel. *See Exposition Universelle de Paris, en 1867.*
- CHRISTISON, Robert. *A Treatise on Poisons.* 8vo. 985 pp. Edinburgh, 1845.
- CHURCH, A. R. *The Laboratory Guide.* 8vo. 174 pp. London, 1870.
- John A. *Notes of a Metallurgical Journey in Europe.* 8vo. 100 pp. New-York, 1873.
- CHYNOWETH, J. B., and Bruckner, W. H. *American Manures and Farmers' and Planters' Guide.* 12mo. 260 pp. Philadelphia, 1871.
- CIZANEOURT, M. de. *Études sur l'acier.* 8vo. 85 pp. Paris, 1863.
- CLARK, F. W. *The Constants of Nature. Part 1. Specific Gravities; Boiling and Melting Points; and Chemical Formulæ.* *Smith. Misc. Coll.* 8vo. 263 pp. Washington, 1873.

- CLARK, Latimer. An Elementary Treatise on Electrical Measurement. 12mo. 175 pp. London, 1868.
- T. E. Fichtelit. A fossil Carbo-Hydrogen, found in the Fichtelgebirge of North-Bavaria. *Inaugural Dissertation*. Vol. XXVII., Pamphlets. Octavo series. 8vo. 32 pp. Heidelberg, 1857.
- CLARKE, Reeves & Co. Second Illustrated Album of Designs of the Phoenixville Bridge Works. 4to. 25 pp., XV. plates. Philadelphia, 1873.
- CLAUS, C. Methodische Reactions—Tabellen behufs Chemischer Qualitativ—Analytischer Untersuchungen, zum gebrauch für Mediciner und Pharmaceuten. 16 pp. Dorpat, 1862.
- CLEAVELAND, Parker. An Elementary Treatise on Mineralogy and Geology. 8vo. 668 pp. Boston, 1816.
- The same. 2 vols. 8vo. Boston, 1816.
- CLEGG, Samuel, Jr. A Practical Treatise on the Manufacture and Distribution of Coal Gas. Fifth edition. 4to. 411 pp. London, 1868.
- COAL and Coal Pits of Great Britain. 12mo. 243 pp. London, 1855.
- Mines. Reports of Inspectors of. 2 vols. Folio. London, 1859.
- COCKBURN, William. A New System of Geology. 12mo. 16 pp. London, 1849.
- COCKERILL, J. Portefeuille de, ou Descriptions des Machines construites dans les établissements de Seraing, depuis sa fondation jusqu'à ce jour. 2 vols. 4to., text; 2 vols. 2to. plates. Paris, 1859–1866.
- COFFIN, James H. Psychometrical Tables for Determining the Forces of Aqueous Vapor, and the relative Humidity of the Atmosphere from Indications of the Wet and the Dry Bulb Thermometer, Fahrenheit. *Smith Misc. Coll.* 8vo. 20 pp. Washington, 1856.
- See, also, under Washington Astronomical and Meteorological Observations, 1869. App. 2.
- COLBURN, Zerah. The Gas Works of London. 8vo. 86 pp. New-York, 1868.
- COLLEGE Directory, (The.) Vol. XVIII., Pamphlets. Octavo series. 8vo. 24 pp. Boston, 1872.
- COLLIER, P. On the Indirect Determination of Potash and Soda. Vol. XVII., Pamphlets. Octavo series. 8vo. 1864.
- COLLIERY Guardian. See under Journals.
- COLMAN, Henry. Agriculture of the United States. An Address delivered 14th April, 1841, before the American Institute in New-York. Pamphlet. 8vo. New-York, 1841.
- COLVIN, Verplanck. Report on a Topographical Survey of the Adirondack Wilderness of New-York. 8vo. 43 pp., with a map. Albany, 1873.
- COLWELL Lead Co. Tin-Lined Lead Pipe. Descriptive Pamphlet. 12mo. New-York, 1873.

- COMBES, Ch. Handbuch der Bergbaukunst bearbeitet von C. Hartmann. 2 vols. 4to. text and plates. Weimar, 1844.
- Traite de l'Exploitation des Mines. 3 vols. 8vo. text. 1 vol. 4to. plates. Leige, 1846.
- COMET, The Great, of 1861. Vol. V., Pamphlets. Octavo series. 8vo. 9 pp. New-Haven, 1861.
- COMMISSIONER of Patents' Journal. *See under Journals.*
- COMPTES Rendus des Séances de L'Academie des Sciences. *See under Journals.*
- CONGRÉS International de Statistique. Compte rendu general des travaux dans ses séances tenues à Bruxelles, 1853; Paris, 1855; Vienne, 1857, et Londres, 1860. Publiée sous la direction de M. le Dr. Engel. 4to. 473 pp. Berlin, 1863.
- CONRAD, T. A. *See United States and Mexican Boundary Survey, Part I.*
- T. A., and Meek, F. B. Check Lists of the Invertebrate Fossils of North America. *Smith. Misc. Coll.* 8vo. 112 pp. Washington, 1866.
- COOK, G. H. Geological Survey of the State of New-Jersey. Annual Report of the State Geologist for the year 1869. 8vo. 57 pp. Trenton, 1870.
- Annual Report of the State Geologist for the year 1870. 8vo. 67 pp. New-Brunswick, 1871.
- Annual Report of the State Geologist for the year 1874. 8vo. 115 pp. Trenton, 1874.
- Report on the Geology of New-Jersey. 4to. 900 pp. Newark, 1868.
- COOKE, J. R., Jr. Chemical Problems and Reactions. 12mo. 128 pp. Cambridge, 1857.
- Crystalline Form not necessarily an Indication of Definite Chemical Composition. Vol. II., Pamphlets. Octavo series. 8vo. 12 pp. 1860.
- First Principles of Chemical Philosophy. 12mo. 533 pp. Boston, 1873.
- On the Dimorphism of Arsenic, Antimony and Zinc. Vol. IX., Pamphlets. Octavo series. 8vo. 7 pp. 1861.
- On Two New Compounds of Zinc and Antimony, and on the Cause of the Variation of Composition Observed in their Crystals. Vol. V., Pamphlets. Quarto series. 4to. 57 pp., I. plate. Cambridge, 1855.
- Religion and Chemistry. Second edition. 8vo. 348 pp. New-York, 1865.
- The Elements of Chemical Physics. 8vo. 738 pp. Boston, 1860.
- The New Chemistry. 8vo. 326 pp. New-York, 1874.
- COOLIDGE, Richard H. Statistical Reports on the Sickness and Mortality in the Army of the United States. Compiled from the Records of the Surgeon-General's Office, embracing a period of five years, from January, 1855, to January, 1860. 4to. Washington, 1860.

- COPE, E. D. Synopsis of New Vertebrata from the Tertiary of Colorado, during the Summer of 1873. Vol. XXI., Pamphlets. Octavo series. 8vo. 19 pp. Washington, 1873.
- See, also, under Geographical and Geological Explorations West of the One Hundredth Meridian.
- COQUAND, H. Traité des Roches. 8vo. 423 pp. Paris, 1857.
- COSMOS, Revue Encyclopédique, &c. See under Journals.
- COSTE, Leon, and Perdonnet, Auguste. Mémoires Metallurgiques sur le Traitement des Minerais de Fer, d'Étain et de Plomb en Angleterre. 2 vols., text and plates. Paris, 1830.
- COTTA, Bernhard von. Die Gesteinlehre. 8vo. 255 pp. Freiberg, 1855.
- The same. 8vo. 333 pp. Freiberg, 1862.
- Die Lehre von der Erzlagerstätten. 8vo. 742 pp. Freiberg, 1859.
- Erzgangbildung in der Sohle eines Flammofens. 8vo. 18 pp. Freiberg, 1851.
- Erzlagerstätten im Banat und in Serbien. 8vo. 108 pp., I. chart. Wien, 1864.
- Katechismus der Geologie. 12mo. 124 pp. Leipsig, 1861.
- COTTEAN, Gustav. Études sur les Mollusques Fossiles de Lyonne. 3 livraisons, (as far as published.) 8vo. 141 pp. Paris, 1853-1857.
- COUCHE, Ch. Voie, Materiel Roulant et Exploitation Technique des Chemins de Fer. Tome. I. Voie. Vol. II. Materiel de Transport et Traction. 2 vols. 8vo., text; 2 atlases. Paris, 1867-1873.
- COULOMB, C. A. Théorie des Machines Simples. 4to. 368 pp., X. plates. Paris, 1821.
- COUPER, N. Investigations of a Naturalist between Mingan and Watchiconti, Labrador. Vol. XXX., Pamphlets. Octavo series. 8vo. 14 pp. Quebec, 1868.
- COX, E. T. First Annual Report of the Geological Survey of Indiana. 8vo. 240 pp., with vol. of Maps. Indianapolis, 1869.
- Second Annual Report of the Geological Survey of Indiana, made during the year 1870. 8vo. 303 pp. Indianapolis, 1871.
- COZZENS, Isacchar. The Geological History of Manhattan Island. 8vo. 114 pp. New-York, 1843.
- CRAIG, H. K. Report of the Officers of the Ordnance Department, on some experiments to determine the Strength and other properties of Metals for Cannon. 4to. 427 pp. Washington, 1856.
- CRAMER, J. A. Anfangsgrunde der Metallurgie. 12mo. Quedlinburg, 1874.
- Elements of the Art of Assaying Metals, with notes and observations by Cromwell Mortimer. 12mo. 462 pp. London, 1764.
- CREDNER, Hermann. Die Kreide von New-Jersey. Vol. XIII., Pamphlets. Octavo series. 8vo. 6 pp., I. plate. Leipsig, 1870.

- CREDNER, Hermann. Geognosticher Aphorismen aus Nord-Amerika.
Vol. XIII., Pamphlets. Octavo series.
8vo. 13 pp., I. plate. Leipsig, 1870.
- Versuch einer Bildungsgeschichte der geognostischen Verhältnisse des Thüringer Waldes. Vol. XX., Pamphlets. Octavo series.
2 vols., text and plates. Gotha, 1855.
- CRELLE, A. L. Rechentafeln welche alles Multipliciren und Dividiren mit Zahlen unter Tausend. Mit einem vorworte von Dr. C. Bremiker. 4to. 1000 pp. Berlin, 1869.
- CRESCY, Edward. Encyclopedia of Civil Engineering, Historical, Theoretical and Practical. 8vo. 1752 pp. London, 1856.
- CRESSON, J. C. American Anti-Incrustator.
8vo. 37 pp. Philadelphia, 1866.
- CRONISE, Titus Fey. The Agricultural and Other Resources of California. Pamphlet. 8vo. San Francisco, 1870.
- CROOKES, William. On the Manufacture of Beet Root Sugar in England and Ireland. 12mo. 290 pp. London, 1870.
- William, and Rohrig, Ernst. A Practical Treatise on Metallurgy. Adapted from the last German edition of Professor Kerl's Metallurgy. 3 vols. 8vo. London, 1868.
- CROTON Aqueduct Department. *See, under Journals*, Annual Report of the.
- CUTBUSU, James. A System of Pyrotechny, designed for Exhibition and for War. 8vo. 612 pp. Philadelphia, 1825.
- CUVIER, G. Le Règne Animal. 5 vols. 12mo. Paris, 1829.
- Recherches sur les Ossemens Fossiles. Fourth edition.
10 vols. 8vo. text. 2 vols. plates. Paris, 1834–1836.
- Recueil des Éloges Historiques.
3 vols. 12mo. Paris, 1819–1827.
- CZERNY, A. Die Bergbau Böhmens. 8vo. 26 pp. Prag, 1868.

D.

- DADDOW, S. H., and Bannan, B. Coal, Iron and Oil; or, the American Practical Miner. 8vo. 786 pp. Pottsville, Pa., 1866.
- DAELEN, R., Hollenberg, A., and Diekman, von. Die Kalibrirung der Eisenwalsen. Drei Gekrönte Preisschriften eingerrichtet dem Verein zur Beförderung des Gewerbfleisses in Preussen.
4to. 140 pp. Berlin, 1869.
- DAGUIN, P. A. Traité Élémentaire de Physique.
4 vol. 8vo. Toulouse, 1867, 1868.
- D'ALIGNY, H. F. Q. *See Exposition Universelle de Paris, en 1867.*
- DALL, W. H. On a New Subfamily of Fluvial Mollusca. vol. XXVI., Pamphlets. Octavo series. 3 pp. 1866.
- Note on Octopus punctatus, Gabb. Vol. XXVI., Pamphlets. Octavo series. 3 pp. 1866.
- DALMAN, J. Ueber Stromcorrectionen im Fluthgebiet.
4to. 104 pp. Hamburg, 1856.
- DALTON, John. Meteorological Observations and Essays. Second edition. 8vo. 244 pp. Manchester, 1834.

DAMMERT, E. A. Das Deich und Strombau-Recht.

2 vols. in 1. 8vo. Hannover, 1816.

DANA, J. D. A System of Mineralogy, including an extended Treatise on Crystallography; with an Appendix, containing the Application of Mathematics to Crystallographic Investigation, and a Mineralogical Bibliography.

8vo. 452 pp., 119 pp. New-Haven, 1837.

——— Same as above. Second edition. 8vo. New-York, 1844.

——— Same as above. Third edition.

8vo. 711 pp. New-York, 1850.

——— Same as above. Fourth edition.

8vo. 533 pp. New-York, 1858.

——— Same as above. Fifth edition.

8vo. 846 pp. New-York, 1868.

——— A Text Book of Geology.

12mo. 354 pp. Philadelphia, 1864.

——— Manual of Geology. Treating of the Principles of the Science with special reference to American Geological History.

8vo. 800 pp. Philadelphia, 1860.

——— Manual of Mineralogy, including Observations on Mines, Rocks, Reduction of Ores, and the Applications of the Science to the Arts.

8vo. 430 pp. New-Haven, 1848.

——— Mineralogical Contributions. Vol. XII., Pamphlets. Octavo series.

8vo. 11 pp. 1854.

——— Notes on Some of the Phenomena of the Glacial Era and their Origin; in Book Notices.

8vo. 7 pp. 1875.

——— Notice of the Chemical and Geological Essays of T. S. Hunt.

Pamphlet. 8vo. 1874.

——— Notice of Dr. Blum's Treatise on Pseudomorphous Minerals, and observations on Pseudomorphism. Vol. IX., Pamphlets. Octavo series.

8vo. 28 pp. 1845.

——— On Certain Laws of Cohesive Attraction. Vol. V., Pamphlets. Octavo series.

8vo. 21 pp. 1847.

——— On Dr. Koch's evidence with regard to the Contemporaneity of Man and the Mastodon in Missouri.

8vo. 13 pp. 1875.

——— On the Glacial and Champlain Eras in New-England. Vol. XV., Pamphlets. Octavo series.

8vo. 16 pp. 1873.

——— On the Homeomorphism of Mineral Species of the Trimetric System. Vol. IX., Pamphlets. Octavo series.

8vo. 28 pp. 1854.

——— Appendix to above. Vol. XI., Pamphlets. Octavo series.

8vo. 5 pp. 1854.

——— On the Isomorphism and Atomic Volume of some Minerals, with a table of Atomic weights. Vol. IX., Pamphlets. Octavo series.

8vo. 29 pp. 1850.

——— Whitney's Geology of California.

8vo. 18 pp.

——— See, also, Brush, G. J.

——— S. L. Manures. A Prize Essay.

Pamphlet. 12mo. Lowell, 1844.

DANIEL, J. F. An Introduction to the Study of Chemical Philosophy.

8vo. 764 pp. London, 1843.

- D'ARCHIAC, Le Vicomte. Rapport sur les Fossiles du Tourtia. 4to. 60 pp. 1846.
- DAS Staatsbudget und das Bedürfnisse für Kunst und Wissenschaft im Königreich Hannover. 4to. 92 pp. Hannover, 1866.
- DAUBENY, Charles. An Introduction to the Atomic Theory. 8vo. 147 pp. Oxford, 1831.
- DAUBER, H. Ermittlung Krystallographischer Constanten und des Grades Ihrer Zuverlässigkeit. Vol. IX., Pamphlets. Octavo series. 8vo. 26 pp., XII. plates. Wien, 1860.
- Svangit und Beudanit. Vol. II., Pamphlets. Duodecimo series. 12mo. 2 pp.
- Untersuchungen an Mineralien der Sammlung des Hrn. Dr. Krantz in Bonn No. 2. Vol. X., Pamphlets. Octavo series. 8vo. 27 pp.
- Same as above. No. 3. Vol. X., Pamphlets. Octavo series. 8vo., 15 pp., I. plate.
- Same as above. No. 6. Vol. X., Pamphlets. Octavo series. 8vo. 27 pp.
- DAVIES, Charles. Elements of Algebra, on the Basis of M. Bourdon, embracing Sturm's and Horner's Theorems; and practical examples. 8vo. 400 pp. New-York, 1872.
- Elements of Analytical Geometry, and of the Differential and Integral Calculus. 8vo. 204 pp. New-York, 1859.
- Elements of Analytical Geometry. 8vo. 204 pp. New-York, 1872.
- Reports of the Committee of the Convocation of the University of the State of New-York on the Metric System. Vol. I., Pamphlets. Duodecimo series. 12mo. 76 pp. New-York, 1873.
- Report to the Secretary of the Treasury in relation to the Various Proposed Lines for Interoceanic Canals and Rail-Roads between the waters of the Atlantic and Pacific Oceans. 8vo. 28 pp., 13 Maps. Washington, 1866.
- The Elements of Surveying and Leveling. 8vo. 431 pp. New-York, 1870.
- The Metric System, explained and adapted to the Systems of Instruction in the United States. Vol. I., Pamphlets. Duodecimo series. 12mo. 20 pp. New-York, 1867.
- University Arithmetic. 12mo. 466 pp. New-York, 1873.
- Charles, and Peck, Wm. G. Mathematical Dictionary and Cyclopedia of Mathematical Science. 8vo. 592 pp. New-York, 1872.
- DAVIS, John E. On Potentials and their Application to Physical Science. Vol. I., Pamphlets. Octavo series. 8vo. 10 pp.
- DAVY, Edmund. On a New Gaseous Compound of Carbon and Hydrogen. Vol. III., Pamphlets. Quarto series. 4to. 11 pp. Dublin, 1838.
- On a Simple Electro-Chemical method of ascertaining the Presence of Different Metals. Vol. V., Pamphlets. Quarto series. 4to. 17 pp. London, 1831.

DAVY, *Sir Humphrey*. Elements of Agricultural Chemistry, with a Treatise on Soils and Manures.

8vo. 396 pp. Philadelphia, 1821.

——— On the Safety Lamp. 8vo. 148 pp. London, 1818.

——— The Collected Works of. Edited by his brother, John Davy. 8 vols. 8vo. London, 1839.

Vol. I. The Life of *Sir Humphrey Davy*. 475 pp.

Vol. II. Early Miscellaneous Papers, from 1799–1805.

Vol. III. Researches on Nitrous Oxide, &c. 342 pp.

Vol. IV. Elements of Chemical Philosophy. 376 pp.

Vol. V. Bakerian Lectures and Miscellaneous Papers, from 1806–1815. 527 pp.

Vol. VI. Researches on the Safety Lamp, &c. 264 pp.

Vols. VII., VIII. Elements of Agricultural Chemistry and other lectures. 391, 365 pp.

DAWSON, J. W. *Acadian Geology*. 8vo. 384 pp. London, 1855.

——— *Acadian Geology*. The Geological Structure, Organic Remains and Mineral Resources of Nova-Scotia, New-Brunswick and Prince Edward's Island.

8vo. 694 pp. London, 1868.

——— On the Structure of certain Organic Remains in the Laurentian Limestones of Canada, with an additional note by W. B. Carpenter. Vol. XXII., Pamphlets. Octavo series.

8vo. 14 pp., II. plates. 1864.

——— *See Geological Survey of Canada*.

——— Wm. McD. Memorandum in relation to the Gold Mines of the Chaudière in Lower Canada. Vol. XXIV., Pamphlets. Octavo series. 8vo. 16 pp. New-York, 1865.

DAXHELET, A. *Les Perforatrices à Air Comprimé Appliquées aux Travaux de Mines système de Dabois et Francois*.

Pamphlet. 8vo. Paris, 1873.

DAY, E. C. H. On an Ancient Beach and Submerged Forest near Wissant. Vol. XIV., Pamphlets. Octavo series. 8vo. 11 pp. 1866.

——— On the Middle and Upper Lias of the Dorsetshire Coast. Vol. XIII., Pamphlets. Octavo series. 8vo. 19 pp. 1863.

——— H. H. Statement relative to experiments made at Bloomingdale, N. J., in Compressing Air and in the Transmitting and use of it through Two Miles of Pipe, in the Summer and Fall of 1870. Vol. VI., Pamphlets. Octavo series.

8vo. 8 pp. New-York, 1870.

DEANE, James. *Ichnographs from the Sandstone of Connecticut River*.

4to. 61 pp., XLVI. plates. Boston, 1861.

DEARBORN, W. L. *Experiments for Making Brick Masonry Impervious to Water*. Vol. IV., Pamphlets. Octavo series.

8vo. 6 pp. 1870.

DE BOURNON, *The Count*. A Descriptive Catalogue of Diamonds in the Cabinet of *Sir A. Hume*.

4to. 52 pp., V. plates. London, 1815.

- DE BOURNON, *The Count*. Cours de Mineralogie.
3 vols. 4to. text, Atlas 4to., LXXII. plates. London, 1808.
- DECRET portant Organization de l'Ecole des Ponts et Chaussées.
8vo. 18 pp. 1867.
- DE CUYPER, Ch. *See* Exposition Universelle de Paris, en 1867.
- DEGOUSSÉE, J. Guide du Sondeur ou Traité Theoretique et Pratique des Sondages.
2 vols. 8vo. text and Atlas. Paris, 1847.
- and Laurent. Guide du Sondeur.
2 vols. 8vo. text and Atlas. Paris, 1861.
- DEJARDIN. Routine de l'Établissement des Voutes.
8vo. 304 pp., V. plates. Paris, 1860.
- DE KAY, James E. *See* Natural History of the State of New-York.
Part I., Zoology.
- DE LA BECHE, H. T. Researches in Theoretical Geology.
16mo. 408 pp. London, 1834.
- Same as above. With notes by Prof. Edward Hitchcock.
16mo. 342 pp. New-York, 1837.
- DELAFIELD, Major R. The Art of War in Europe in 1854, 1855, 1856. 4to. 287 pp., CLXXXVI. plates. Washington, 1860.
- DE LA FOSSE, G. Rapport sur les Progrès de la Mineralogie.
8vo. 97 pp. Paris, 1867.
- DE LA GOUPILLIÈRE, J. N. H. Traité de Mecanismes.
8vo. 483 pp., Paris, 1864.
- D'ELAISTRE, J. R. La Science de l'Ingénieur, divisée en Trois Parties ou l'on traite des Chemins, des Ponts, des Canaux et des Aqueducs.
2 vols. 4to. text, LXI. plates. Lyons, 1825.
- DELAMBRE. *See* Méchain et Delambre.
- DELAMÉTHÉRIE, J. C. Leçons de Mineralogie.
2 vols. 8vo. Paris, 1872.
- DELAUNAY, Ch. Traité de Mecanique Rationnelle.
8vo. 619 pp. Paris, 1856.
- DELESSE, A. Procédé Mecanique pour Determiner la Composition des Roches, et Études sur les Metamorphisms des Roches.
8vo. 72, 95 pp. Paris, 1866, 1869.
- Les Oscillations des Côtes de France. Vol. XIII., Pamphlets.
Octavo series. 8vo. 12 pp. Paris, 1872.
- DEMPSEY, G. D. A Rudimentary Treatise on the Locomotive Engine, in all its phases. Second edition.
2 vols., text and plates. London, 1867.
- DENAYROUZE, A. and L. Des Aérophones et de leur application au travail dans les mines.
8vo. 67 pp. Paris, 1872.
- DENKSCHRIFT zur Erinnerung an die Verdienste des in Dresden am 30 Juni, 1817, verstorbenen K. S. Berggraths Werner und an die Fortschritte bei der Bergakademie zu Freiberg.
4to. 174 pp. Freiberg, 1848.
- DE PAMBOUR C. G. *See* Renwick, James.
- DEPARTMENT of Agriculture. *See, under Journals*, Annual Report of the Commission of the; also, Monthly Reports of the.
- DER BERG GEIST ZEITUNG. *See under Journals*.

- DER BERGWERKS BETRIEB. } *See under Journals.*
 DER BERGWERKSFREUND. }
 DER GRUBENBRAND und die bösen Wetter. 12mo. 24 pp. Clausthal, 1849.
- DE RIBANCOURT, P. Éléments de Chimie Docimastique. 8vo. 317 pp. Paris, 1786.
- DER ZINK. 4to. 52 pp., XV. plates. Breslau, 1857.
- DESCHANEL, A. Privat. Elementary Treatise on Natural Philosophy. Translated and edited, with extensive additions, by J. D. Everett. Part I., Mechanics, Hydrostatics and Pneumatics. Part II., Heat. Part III., Electricity and Magnetism. Part IV., Sound and Light. 4 vols. 8vo. London and New-York, 1871-1874.
- Manuel de Mineralogie. Tome Second. Premier fascicule. 8vo. Paris, 1874.
- Memoire sur l'Emploi du Microscope Polarisant. 8vo. 40 pp.
- Notices Mineralogiques. Vol. X., Pamphlets. Octavo series. 8vo. 19 pp., I. Plate. Paris, 1856.
- Observations sur les Modifications permanentes et temporaires que l'action de la chaleur apporte à quelques propriétés optiques de plusieurs corps Crystallisés; and a note, "Sur la forme cristalline et les propriétés optiques de la Tephroïte. Vol. IX., Pamphlets. Octavo series. 8vo. 16 pp. 1862.
- DESCRIPTION Geologique de la Partie du Sud des Montagnes de l'Ural. St. Petersburg, 1858.
- DE SELLE, A. Comparaison et Transformation des Notations Cristallographiques de Levy, Miller, Weiss, Naumann, Dana. 4to. 86 pp. Paris, 1874.
- DESSOYE, J. B. J. Guide de l'Emploi de l'Acier. Ses Propriétés. 12mo. 304 pp. Paris, 1863.
- DEWALQUE, G. Atlas de Crystallographie. 8vo. 16 pp., XVIII. plates. Paris, 1862.
- Description du Lias de la Province de Luxembourg. *Inaugural Dissertation.* Vol. XV., Pamphlets. Octavo Series. 8vo. 64 pp. Liège, 1857.
- Rapport sur les Observations sur le terrain silurien de l'Ardenne par MM. Gosselet et C. Malaise. 8vo. 6 pp. 1868.
- Rapport sur un memoire envoyé au concours de la classe des sciences de 1874, en réponse à la question suivante: Faire connaître, notamment au point de vue de leur composition, les roches plutoniennes, ou considérées comme telles de la Belgique et de l'Ardenne française. 8vo. 26 pp. Paris, 1874.
- Sur la Correlation des Formations Cambriennes de la Belgique et du Pays des Galles. 8vo. 4 pp. 1874.
- DEWEY, Chester, and others. Reports on the Zoology and Botany of Massachusetts. Vol. I. Report on the Herbaceous Flowering Plants, by Chester Dewey. 276 pp.

DEWEY, Chester, *and others.*

Report on the Quadrupeds, by Ebenezer Emmons. 86 pp.

Report on the Insects, by T. W. Harris. 495 pp.

Vol. II. Report on the Invertebrata, by Augustus A. Gould.
373 pp.

Report on the Fishes, Reptiles and Birds, by D. H. Storer.
426 pp. 2 vols. 8vo. Boston, 1839-1841.

D'HALLOY, J. J. D'O. Coup D'Œil sur la Geologie de la Belgique.
8vo. 132 pp. Brussels, 1842.

——— Éléments de Geologie ou Seconde Partie des Elements
D'Histoire Naturelle Inorganique. Second edition.

8vo. 740 pp., I. Chart. Paris, 1835.

——— Mémoires pour servir à la Description Géologique des Pays-
Bas, de La France et de Quelques Contrés Voisines.

12mo. 308 pp., II. Maps. Namur, 1828.

——— Précis Élémentaire de Geologie. Eighth edition.
8vo. 638 pp. Brussels, 1868.

DICKMANN. *See* Kalibrirung.

DIE Baulichen Anlagen, &c. *See under Journals.*

DIE Chursachsiche Bergwerksverfassung.

8vo. 146 pp. Leipsig, 1787.

DIE Fortschritte der berg-und hüttenmännischen Wissenschaften in
den letzten hundert Jahren. Als zweiter Theil der Festchrift
zum hunderjährigen Jabiläum der Königl. Sachs. Bergaka-
demie zu Freiberg. 8vo. 146 pp. Freiberg, 1867.

DIE Gruben und Anlagen der Vereinigungs—Gesellschaft für
Steinkohlenbau in Wurm—Revier zu Kohlschied bei Aachen.
12mo. 8 pp.

DIE Lage der Bergbau-und Hütten—Industrie in Ober Schlesien.

8vo. 92 pp. Berlin, 1861.

DIE Organisation des Staatsbauwesens im Königreiche Hanover.

Folio. 55 pp. Hanover, 1861.

DIEST, P. H. von. *See, under Journals,* Jahboeck van het mijn-
wezen in nederlandsch Oost-Indie.

DIMOND, E. W. The Chemistry of Combustion, Applied to the
Economy of Fuel, with special reference to the Construction
of Fire Chambers for Steam Boilers.

8vo. 162 pp. Worcester, 1867.

DIRECTIONS for Collecting Specimens of Natural History. *Smith.*
Misc. Coll. 8vo. 103 pp. Washington, 1863.

DIVING Bell, (the Improved,) of the Pacific Submarine Exploring
Company. 12mo. 12 pp. New-York, 1869.

DALOMIEN, D. de. Mémoire sur les Iles Ponces.

8vo. 525 pp. Paris, 1788.

DINGLER's Polytechnisches Journal. *See, under Journals,* Poly-
technisches Journal.

DONNEGAN, James. Greek and English Lexicon.

8vo. 1413 pp. Philadelphia, 1844.

D'ORBIGNY, Alcide. Cours Élémentaire de Paleontologie et de Ge-
ologie Stratigraphique.

3 vols. 12mo. text; 1 vol. 4to. plates. Paris, 1849-1852.

- D'ORBIGNY, Alcide. *Prodrome de Paleontologie.*
3 vols. 12mo. Paris, 1850-1852.
- Charles. *Description des Roches composant L'Écorce Terrestre, et des Terrains Cristallins constituant le Sol Primitif. Rédigé d'après la classification, les manuscrits inédits, et les leçons publiques de P. L. A. Cordier.*
8vo. 553 pp. Paris, 1868.
- DORR, Eben P. *A Brief Sketch of the First Monitor and its Inventor. A Paper read before the Buffalo Historical Society, January 5, 1874.* Pamphlet. 8vo. Buffalo, 1874.
- DOUGLAS, James, Jr. *See* Hunt, T. Sterry.
- DRAPER, Henry. *On the Changes of Blood-Cells in the Spleen.* Vol. XXVIII., Pamphlets. Octavo series.
- DREW, W. H. *A Treatise on Conic Sections.*
8vo. 9 pp. New-York, 1858.
- DUBIEF, L. F. *Sur le Manufacture de Cidre et de Poire. Rédigé par F. Malepeyre.*
12mo. 138 pp. London, 1864.
- DUBOIS and François. *Notice sur L'Installation des Appareils à Comprimer L'Air et de Perforation aux Charbonnages de la Société de Marihay.*
8vo. 16 pp. Liege, 1873.
- DUCHANOT. *See* Rivot et Duchanot.
- DUDLEY, Dud. *Metallum Martis; or, Iron made with Pit-Coale, Sea-Coale, &c.*
8vo. 119 pp. London, 1665.
- DUFRENOY, A. *Cours de Mineralogie.* 4to. 336 pp. Paris, 1847.
- *Traité de Mineralogie.* Seconde edition.
5 vols. 8vo. Paris, 1856-1859.
- E. Elie de Beaumont, Coste, Leone, and Perdonnet, Auguste. *Voyage Metallurgique en Angleterre.* Second edition.
2 vols. 8vo. text; Atlas, XXXVIII. plates. Paris, 1837.
- DUHAMEL, J. M. C. *Elémens de Calcul Infinitesimal.*
2 vols. 8vo. Paris, 1856.
- DUMARTRAY and Rouhard. *Coup D'Œil sur la Republique de l'Amerique Centrale.* Pamphlet. 4to. Paris, 1832.
- DUMAS, Jean B. *Traité de Chimie appliquée aux Arts.*
7 vols. 8vo. Paris, 1828-1844.
- J., and Boussingault, J. *The Chemical and Physiological Balance of Organic Nature.* 16mo. 156 pp. London, 1844.
- DUMMONT, André. *Carte Geologique de la Belgique indiquant les Terrains qui se Trouve au-dessous du Limon Hesbayen et du Sable Campinien.* Atlas, IX. plates.
- DUMONT, A. H. *Mémoire sur les Terrains Triassiques et Jarassiques de Luxembourg.* Vol. VII., Pamphlets. Quarto series.
- *Tableaux Analytiques des Mineraux.* Vol. V., Pamphlets. Quarto series.
4to. 36 pp. 1841.
- 4to. 95 pp. Brussels.
- DUMREICHER, A. *Gesamtüberblick über die Wasserwirtschaft des Nordwestlichen Oberharzes.*
8vo. 87 pp. Clausthal, 1868.
- DUNKER, W. *See* Koch, C. L., and Dunker, W.

DUNKER, Wilh. von Meyer, Herman and Zittel, K. A. Palæontographica: Beiträge zur Naturgeschichte der Vorwelt.

Vols. I. to XVIII., and Vols. XX., XXI. and XXII., and Supplemental volume, text and plates, as far as published.
22 vols. 4to. Cassel, 1851-1874.

DÜRRE, E. F. Handbuch des gesammten Eisengiesserei betriebes
Band I. 8vo. 760 pp. Leipsig, 1870.

DURIE, E. F. Über die Constitution des Roheisens.

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DUSSAUCE, H. A General Treatise on the Manufacture of Soap.

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——— A Practical Treatise on the Fabrication of Matches, Gun Cotton, Colored Fires and Fulminating Powders.

12mo. 336 pp. Philadelphia, 1864.

——— A Treatise on Coloring Matters derived from Coal Tar.

DU TEMPLE, L. Cours de Machines à Vapeur.

8vo. 607 pp. 4to. Atlas, XXVII. plates. Paris, 1865.

DYER and Color Maker's Companion.

12mo. 104 pp. Philadelphia, 1850.

DYEING and Calico Printing. A Practical Treatise on, including the Latest Inventions and Improvements, with an appendix.

Comprising definitions of chemical names, with tables of weights, measures, thermometers, hydrometers, &c., by An Experienced Dyer. With a Supplement, containing Recent Discoveries in Color Chemistry, by Robert Macfarlane.

8vo. 729 pp., X. plates. New-York, 1860.

E.

EATON, Amos. Index to the Geology of the Northern States; to which is prefixed a Geological Grammar. Second edition.

12mo. 286 pp. Troy, 1820.

EBELMEN. *See* Salvetat.

EBERMAYER, Edward. Ueber die Nickelgewinnung auf der Aurora-hütte bei Gladenbach. *Inaugural Dissertation.*

8vo. 33 pp. Gottingen, 1855.

ÉCOLE Imperiale des Ponts et Chaussées. Paris.

——— Catalogue des Galeries de L'École des Ponts et Chaussées.

8vo. 557 pp. Paris, 1873.

——— Catalogue des Livres composant la Bibliotheque de.

8vo. 625 pp. Paris, 1872.

——— Decret portant Organization de L'École des Ponts et Chausées. Vol. XXXII., Pamphlets. Octavo series.

8vo. 18 pp. Paris, 1867.

——— Collection des Dessins distribués aux élèves.

Text, Vol. I., 5 livraisons; vol. II., 7 livs., CLV. plates.

ÉCOLES des Arts et Manufactures et des Mines annexée à l'université de Liège. Programmes généraux et programmes détaillés, &c.

8vo. Brussels, 1864.

- EDE, George. The Management of Steel, including Forging, Hardening, Tempering, Annealing, Shrinking and Expansion; also the case Hardening of Iron.
12mo. 41 pp. New-York, 1864.
- EDINBURGH Geological Society. *See, under Journals*, Transactions of the.
- Philosophical Magazine. *See, under Journals*, London, Dublin and Edinburgh Philosophical Magazine and Journal of Science.
- EDMONDS, J. M. The Manufactures of the United States in 1860. Compiled from the Original Returns of the Eighth Census, under direction of the Secretary of the Interior.
4to. 742 pp. Washington, 1865.
- EDUCATION and Status of Civil Engineers in the United Kingdom and in Foreign Countries. Compiled from Documents supplied to the Council of the Institution of Civil Engineers, 1868 to 1870.
8vo. 213 pp. London, 1870.
- EDWARDS, A. M. A Series of Chemical Tables. New-York, 1870.
- M. Milne. Manual of Zoology. Translated from the French by R. Knox. Second edition.
12mo. 564 pp. London, 1863.
- EGLESTON, T. A Catalogue of Minerals. Vol. XI., Pamphlets. Octavo series.
8vo. 42 pp. Washington, 1863.
- A Check List of the Silicates, with their formulæ and crystalline systems. Prepared for the use of the students of the School of Mines of Columbia College. Vol. XII., Pamphlets. Octavo series.
8vo. 12 pp. New-York, 1866.
- Diagrams to Illustrate the Lectures on Crystallography delivered at the School of Mines, Columbia College.
8vo. 10 pp., XXXVIII. plates. New-York, 1866.
- Lectures on Mineralogy. Delivered at the School of Mines of Columbia College. Part 2, Descriptive Mineralogy.
8vo. 187 pp. New-York, 1871.
- Metallurgical Tables used at the School of Mines, Columbia College, New-York.
8vo. 16 pp., XII. plates. New-York, 1868.
- Tables for the Determination of Minerals. Arranged for the use of the students of the School of Mines, Columbia College, New-York. Second edition.
8vo. 42 pp. New-York, 1868.
- Tables of Weights, Measures and Coins.
32mo. 36 pp. New-York, 1868.
- Tables to Illustrate the Metallurgical Lectures delivered at the School of Mines, Columbia College, New-York. Copper.
8vo. 91 pp., IV. plates. New-York, 1869.
- Tables to Illustrate the Metallurgical Lectures delivered at the School of Mines, Columbia College, New-York. Iron.
8vo. 92 pp., II. plates. New-York, 1869.
- EISENLOHR, W. Lehrbuch der Physik.
8vo. 808 pp. Stuttgart, 1870.

- ELDERHORST, William. Manual of Qualitative Blowpipe Analysis and Determinative Mineralogy. Sixth edition. Edited by Henry B. Nason and Charles F. Chandler. 16mo. 312 pp. Philadelphia, 1874.
- ELECTRO-MAGNETIC Telegraph. Proceedings of the Regents of the Smithsonian Institution in relation to the. 8vo. 70 pp. Washington, 1859.
- ELIOT, C. W., and Storer, E. H. A Compendious Manual of Qualitative Chemical Analysis. 8vo. 191 pp. New-York, 1869.
- and Storer, Frank H. On the Impurities of Commercial Zinc, with Special Reference to the Residue Insoluble in Dilute Acids, to Sulphur and to Arsenic. vol. VIII. Pamphlets. Quarto series. 4to. 39 pp. 1860.
- ELLIOTT, E. B. A Letter on the Credit of the U. S. Government, with Comparative Tables. Addressed to the Secretary of the Treasury. 8vo. 29 pp. Washington, 1871.
- The United States Customs Tariff under the Acts of May 1 and June 6, 1872. 8vo. 40 pp. Washington, 1872.
- George H. Report of a Tour of Inspection of European Light-House Establishments, made in 1873, under the authority of Hon. William A. Richardson, Secretary of the Treasury. 8vo. 288 pp. Washington, 1874.
- ELLIS, Daniel. An Inquiry into the Changes Induced on Atmospheric Air, by the Germination of Seeds, the Vegetation of Plants, and the Respiration of Animals. 12mo. 246 pp. Edinburgh, 1807.
- ELSCHING, A. Kurzgefasste Anleitung zu barometrischen Nivellirungen mit barometeren. 8vo. 72 pp. Salisburg, 1809.
- EMANUEL, H. Diamonds and Precious Stones. 8vo. 266 pp. London, 1867.
- EMMONS, Ebenezer. The Geology of the Eastern Counties of North Carolina. 8vo. 314 pp. Raleigh, 1858.
- The Geology of the Midland Counties of North Carolina. 8vo. 351 pp. New-York, 1856.
- See Dewey, Chester; see, also, Natural History of the State of New-York, Part IV., Vols. 2, 4.
- EMORY, W. H. Notes of a Military Reconnoissance from Fort Leavenworth, in Missouri, to San Diego, in California, including parts of the Arkansas, Del Norte and Gila Rivers. 8vo. 416 pp. Washington, 1848.
- See, also, under United States and Mexican Boundary Survey.
- EMPORIUM of Arts and Sciences. See under Journals.
- ENDEMANN, Herman. Die neutralen und die sauren Aether der schwefligen Säure *Inaugural Dissertation* zur Erlangung der Doctorword. 12mo. 16 pp. Marburg, 1866.
- ENGEL, Dr. Rechenschafts-Bericht über die Fünfte Sitzungsperiode des Internationalen Statistischen Congresses in Berlin. Band I. Berichte über die Vorbereitungen des Congresses. Band II. Berichte über die Verhandlungen des Congresses. 2 vols. 4to. Berlin, 1865.

ENGEL, Dr. *Compte-Rendu Général des Travaux du Congrès International de Statistique dans ses seances tenues à Bruxelles, 1853; Paris, 1855; Vienne, 1857, et Londres, 1860. Publié par les orders de S. E. M. C. Compte D'Eulenburg.*

4to. 273 pp. Berlin, 1863.

ENGELBREIT, K. *Die Instrumente der höheren und niederen Geodäsie und der Hydrometrie.*

2 vols., text and plates. Nurnberg, 1852.

ENGINEERING. London.

— and Mining Journal. New-York. } *See under Journals.*

ENGLEHARDT, Moritz von. *Geognostischer Umriss von Finland.*

Folio. 44 pp. Berlin, 1820.

ENTELWEIN, J. A. *Beschreibung der Erbauung und Einrichtung einer Vereinigten Brauerei und Branntwein-brennerei auf dem Land.*

4to. 68 pp. Berlin, 1802.

ERDMAN'S Journal. *See, under Journals, Journal für practische Chemie.*

ERFAHRUNGEN im berg-und hüttenmännischen Maschinen-Bau und Aufbereitungswesen. *See under Journals.*

ERKLARENDEN Wörterbuch der im Bergbau, in der Hüttenkunde und in Salinwerken vorkommenden-technicken Kunstausdrücke und Fremdwörter.

8vo. 176 pp. Burgsteinfurt, 1869.

ERLAUTERUNGEN zu der Karte über die Production, Consumption und Circulation der mineralischen Brennstoffe in Preussen.

Pamphlets. 8vo. Berlin, 1873.

ESCHWEGE, W. L. v. *Beiträge zur Gebirgskunde Brasiliens.*

2 vols., text and plates. Berlin, 1832.

— *Pluto Braziliensis.* 2 vols., text and plates. Berlin, 1833.

ESSEX Institute. *See, under Journals, Bulletin of the.*

EULER, Leonard. *Élemens D'Algèbre. Traduit de L'Allemand, revue et augmentée de notes.* 2 vols. 12mo. Paris, 1807.

EVANS, Thomas W. *Essais D'Hygiene et de Therapeutique Militaires présentés a la Commission des États-Unis.*

8vo. 385 pp. Paris, 1865.

EVANS, W. J. *The Sugar Planter's Manual.*

8vo. 264 pp. Philadelphia, 1848.

EVERSMAN, F. A. A. *Übersichte der Eisen-und Stahl-Erzeugung, in so fern auf Wasserwerken vorgeht in den Ländern zwischen Lahn und Lippe.* Vol. II., Pamphlets. Quarto series.

4to. 104 pp. Dortmund, 1804.

EWING, Alexander. *A Synopsis of Practical Mathematics.*

12mo. 232 pp. Edinburgh, 1791.

EXHIBITION of the Works of Industry of all Nations. London, 1851.
Reports of the Juries on the subjects in the Thirty Classes into which the Exhibition was divided.

8vo. London, 1853.

— *Travaux de la Commissions Française sur L'Industrie des Nations.* Tome I., parts 1, 2, 3, 5; Tome III., parts 1, 2; Tomes IV. to VIII.

12 vols. 8vo. Paris, 1858.

- EXNER, Franz. Untersuchungen über die Härte an Krystallflächen. *Prize Essay*. 8vo. 165 pp., LXVIII. plates. Vienna, 1873.
- EXPEDITION of an American Squadron to the China Seas and Japan, performed in the years 1852, 1853 and 1854, under the command of Commodore M. C. Perry, United States Navy, by order of the Government of the United States. Narrative of the Expedition. Vol. II. 4to. 414 pp., XVII. charts. Washington, 1856.
- EXPLORATIONS and Surveys for a Rail-Road Route from the Mississippi River to the Pacific Ocean, made under the direction of the Secretary of War, during the years 1853 to 1855. Vols. I. to XI.; Vol. XII., parts 1, 2. 13 vols. 4to. Washington, 1855-1860.
- EXPOSITION du Havre. Ribeyre Felix. *Les Annales de L'Exposition du Havre*. 8vo. Paris, 1868.
- EXPOSITION Universelle de Paris, en 1867. Banks, N. P. A Speech upon the Representation of the United States at the Exhibition of the World's Industry, Paris, 1867. Delivered in the House of Representatives, March 14, 1866. 8vo. 24 pp. Washington, 1866.
- Belgique. Catalogue des Produits Industriels et des Œuvres d'Art. 12mo. 365 pp. Brussels, 1867.
- Belgique. Documents et Rapports. 3 vols. 8vo. Brussels, 1868.
- Berichte über die Allgemeine Ausstellung zu Paris im Jahre, 1867, erstattet von den für Preussen und die Norddeutschen Staaten ernannten mitgliedern der internationalen Jury. 8vo. 621 pp. Berlin, 1868.
- Berichte über die Welt-Ausstellung zu Paris, im Jahre, 1867. Band I. Einleitung—1. Die Kunstwerke und die Histoire der Travail. 2. Instrument für Kunst und Wissenschaft. Band II. Text and plates. 1. Werkzeuge und Maschinen. 2. Verkehrsmittel. Band III. 1. Chemisch-Metallurgie. 2. Nahrungsmittel und Getränke. Band IV. 1. Garne, Gewebe, Bekleidungs-Gegenstände und Papier. 2. Kunst Gewebe, Möbel, und Einrichtungsstücke. Band V. Land und Forstwissenschaft. Band VI. Social-Oekonomische Abtheilung. 6 vols., text; 1 vol. plates. 8vo. Vienna, 1869.
- Blake, William P. Report on Civil Engineering and Public Works of the Paris Exposition. 8vo. 49 pp. Washington, 1870.
- Blake, William P. Reports of the United States Commissioners to the Paris Universal Exposition, 1867. 6 vols. 8vo. Washington, 1870.
- Catalogue Descriptif des Collections exposées par la Commission Géologique du Canada. 8vo. 72 pp. Paris, 1867.
- Catalogue Officiel des Exposants Récompensés par le Jury International. 8vo. 455 pp. Paris.

EXPOSITION Universelle de Paris, en 1867.

Catalogue of the British Section, containing a list of the Exhibitors of the United Kingdom and its Colonies, and objects which they exhibit. In English, French, German and Italian. With Statistical Introductions and an Appendix. 8vo. 1150 pp. London, 1867.

Chevalier, Michel. *Rapports du Jury International.*

13 vols. 8vo. Paris, 1868.

Complete Official Catalogue of the Paris Universal Exhibition, 1867. English version, translated from the French Catalogue, published by the Imperial Commission. Second edition. 8vo. 1008 pp. London.

D'Aligny, H. F. O. *Minerals of the United States in the Paris Exposition, 1867.* 8vo. 90 pp. Paris, 1867.

D'Aligny, H. F. O. U. S. Commissioner, Huet, A., Geyler, F., and Lepainteur, C. *Report on Mining and the Mechanical Preparation of Ores.*

8vo. 104 pp., III. plates. Washington, 1870.

De Cuyper, Ch. *Revue de L'Exposition de 1867. Mines, Metallurgie, Chimie, Mécanique, Navigation, Chemins de Fer, Constructions, Sciences et Arts Appliqués à L'Industrie.* Tomes I. to IV. Text and plates. 6 vols. 8vo.

Hewitt, Abram S. *The Production of Iron and Steel in its Economic and Social Relations.*

8vo. 104 pp. Washington, 1868.

Itzenplitz, *Grafen von.* *Katalog für die Sammlung der Bergwerks-und Steinbruchs-Produkte Preussens auf der Industrie und Kunstausstellung zu Paris im Jahre, 1867.*

Johnson, *Pres't.*, Andrew. *A Message to the House of Representatives, transmitting a report from the Secretary of State concerning the Universal Exposition to be held at Paris, in the year 1867.* Vol. I., Pamphlets. Octavo series.

8vo. 110 pp. Washington, 1865.

Johnson, *Pres't.*, Andrew. *A Message to the House of Representatives, transmitting the report of Elliot C. Cowdin, Esq., Commissioner to the Paris Exposition of 1867, on Silk and Silk Manufactures.* Vol. XVIII., Pamphlets. Octavo series.

8vo. 38 pp. Washington, 1868.

Lacroix, Eugène. *Études sur L'Exposition de 1867, ou Les Archives de L'Industrie aux XIX. Siècle. Description Générale, Encyclopédique, Méthodique et Raisonnée de L'État Actuel des Arts, des Sciences, de L'Industrie et de L'Agriculture, chez tous les Nations.*

10 vols. 8vo., text and plates. Paris, 1867-1869.

Le Roux, Jules. *L'Industrie Moderne au Champ de Mars. Coup D'Œil sur L'Exposition de 1867.*

8vo. 310 pp. Paris.

Mudge, E. R., *United States Commissioner.* Assisted by John L. Hayes. *Report upon Wool and Manufactures of Wool.* 8vo. 143 pp. Washington, 1868.

EXPOSITION Universelle de Paris, en 1867.

Notices sur les Collections, Cartes et Dessins. Relatifs au Service du Corps Imperial des Mines.

8vo. 315 pp. Paris, 1867.

Notices sus les Modeles, Cartes et Dessins. Relatifs aux Travaux Publics.

8vo. 548 pp. Paris, 1867.

Opperman, C. A. Visites D'Un Ingenieur a L'Exposition Universelle de Paris, en 1867.

2 vols. 8vo. text and plates. Paris, 1867.

Rapports du Comité des Poids et Mesures et de Monnaies de L'Exposition de 1867.

12mo. 153 pp. Paris, 1867.

Reports on the Paris Universal Exhibition, 1867, Presented to both Houses of Parliament by Command of Her Majesty. Vols. II. to V., and Index Volume.

5 vols. 8vo. London, 1869.

Rittenger, G. von. Kurze Mittheilungen über Berg-und-Huttenwesens-Maschinen und Baugegenstände auf der Allgemeinen Industrie Ausstellung zu Paris, 1867.

8vo. 71 pp. Vienna, 1867.

Second Edition of Official Correspondence of the subject, published by the Department of State for the Information of the Citizens of the United States, containing General Regulations, Classification of Articles, &c.

4to. 43 pp. Washington, 1865.

Smith, J. L. The Progress and Condition of several Departments of Industrial Chemistry.

8vo. 146 pp. Washington, 1869.

EXTRACTS from the Proceedings of the Board of Regents of the Smithsonian Institution in relation to the Electro-Magnetic Telegraph.

8vo. 39 pp. Washington, 1857.

EYEREL, Josephus. Xaverii Wulfen de Plumbo Spatoso Carinthiaco.

4to. 108 pp. Vindobonæ, 1791.

EYTELWEIN, J. A. Beschreibung der Erbauung und Einrichtung einer vereinigten Brauerei und Branntwein-brennerei auf dem Lande.

4to. 68 pp., IV. plates. Berlin, 1802.

F.

FAIRBAIRN, William. Iron, its History, Properties, and Processes of Manufacture.

8vo. 293 pp. Edinburgh, 1865.

— On the Application of Cast and Wrought Iron to Building Purposes. Third edition.

8vo. 314 pp. London, 1864.

FAIRBANKS, Lorenzo. A Complete System of Practical Bookkeeping, by Double Entry.

8vo. 189 pp. Boston, 1851.

FALLER, Gustav. Geschichten der K. Berg-und Forstakademie im Schemnitz.

8vo. 106 pp. Schemnitz, 1868.

— Beschreibung einiger wichtigerer Metallbergbau in Oberungarn.

8vo. 82 pp. Schemnitz, 1868.

- FALLER, Gustav. Die Schemnitzer Metall-Bergbau in seinem jetzigen Zustande. 8vo. 89 pp. Schemnitz, 1835.
- FARADAY, Michael. The Chemical History of a Candle. Edited by Wm. Crookes. 8vo. 226 pp. London, 1874.
- Experimental Researches in Electricity. (Third series.) Vol. I., Pamphlets. Quarto series. 4to. 32 pp., I. diagram. London, 1833.
- On a Peculiar Class of Acoustical Figures; and on the Forms of Fluids Vibrating on Elastic Surfaces. Vol. I., Pamphlets. Quarto series. 4to. 42 pp. London, 1831.
- Chemical Manipulation. 8vo. 56 pp. London, 1827.
- On the Existence of a Limit to Vaporization. Vol. I., Pamphlets. Quarto series. 4to. 9 pp. London, 1826.
- The Various Forces of Matter. 12mo. 198 pp. New-York, 1860.
- FARBER Zeitung. *See under Journals.*
- FAREY, John. Treatise on the Steam Engine, historical, practical and descriptive. 4to. 728 pp., XXV. plates. London, 1827.
- FAVRE, Ernest. Étude sur la Géologie des Alpes. Vol. XII., Pamphlets. Octavo series. 8vo. 48 pp., II. plates. Geneva, 1870.
- FAYE, H. A. E. Sur la situation actuelle du Bureau des Longitudes. Vol. X., Pamphlets. Quarto series. 4to. 8 pp. 1872.
- FEHLING, Hermann v. Neues Handwörterbuch der Chemie. Auf Grundlage des von Liebig, Poggendorff und Wöhler, Kolbe und Fehling herausgegebenen Handwörterbuchs der reinen und angewandten Chemie. Vol. I., 1247 pp. Vol. II., parts 1, 2, 3. Braunschweig, 1871–1874.
- *See* Kolbe.
- FERBER, Johann Jacob. Nachricht von dem Auquicken der gold und silberhaltigen Erze, Kupfersteine und Speisen in Ungarn und Böhmen. 24mo. 200 pp. Berlin, 1787.
- FESTSCHRIFT zum hundertjährigen Jubiläum der Königlichen Sächsischen Bergakademie zu Freiberg am 30 Juli, 1866. 8vo. 336 pp. Dresden, 1866.
- FEUCHTWANGER, Lewis. Report on Frye's Island, (also called L'Etang Island,) N. W. shore of the Bay of Fundy. Vol. XXIV., Pamphlets. Octavo series. 8vo. 14 pp. New-York, 1866.
- PICHEL, J. E. von. Mineralogische Aufsätz. 8vo. 374 pp. Vienna, 1794.
- FIGUIER, Louis. The World before the Deluge. 8vo. 448 pp. New-York, 1866.
- *See, also, under Journals, Année Scientifique et Industrielle.*
- FISCHER, H. Chronologischer Ueberblick über die Allmälige Einführung der Mikroskopie, in das Studium der Mineralogie, Petographie u. Paleontologie. 8vo. 80 pp. Freiberg, 1868.
- Einführung der Mikroskopie in der Mineralogie, &c. 8vo. 80 pp. Freiberg, 1868.
- Kritische mikroskopisch-mineralogische Studien. 8vo. 64 pp. Freiberg, 1871.
- The same. 8vo. 96 pp., II. plates. Freiberg, 1873.

- FITTON, W. H. A Geological Sketch of the Vicinity of Hastings.
16mo. 94 pp. London, 1833.
- An Account of some Geological Specimens from the Coast
of Australia. 8vo. 64 pp. London, 1826.
- Observations on some of the Strata below the Chalk,
between the Chalk and Oxford Oolite, in the Southeast of
England. 4to. 400 pp. London, 1836.
- FLACHAT, E., Petiet, J., and Barrault, A. *Traité de la Fabrication
de la Fonte et du Fer.* 3 vols. 4to. Paris, 1842-1844.
- FLAGG, Melzer. Remarks on the Culture of the Grape, and the
Manufacture of Wine in the Western States, comprised in a
report made by direction of the Cincinnati Horticultural
Society. 8vo. 32 pp. Cincinnati, 1846.
- FLANDRIN, Ch. *Traité des Poisons, ou Toxicologie.*
3 vols. 8vo. Paris, 1846-1853.
- FLECK, H., and Hurtig, H. *Geschichte Statistik und Technik der
Steinkohlen.* 4to. 423 pp. Munchen, 1865.
- FLOETZ-KARTE des Niederrheinisch-Westfaehlischen Steinkohlen-
beckens. 2to. XXI. plates.
- FLUGEL, J. G. *Vollständiges English-Deutsches und Deutsch-
Englishches Wörterbuch enthaltend alle in den beiden
Sprachen allgemein gebräuchliche Wörter.*
2 vols. 8vo. Leipsig, 1847.
- FOETTERLE, Franz. *Das Vorkommen die Production und Circula-
tion des Mineralischen Brennstoffes.* Vol. XV., Pamphlets. Octavo
series. 8vo. 28 pp., and chart 4to. Weimar, 1870.
- FOLSCH, A. *Die Stadt Wasserkunst in Hamburg.*
8vo. 83 pp. Hamburg, 1851.
- FONTENELLE, J. *Nouveau Manuel Complet du Blanchissement.*
2 vols. 24mo. Paris, 1855.
- *Theoretisch-practisches Handbuch der Oelfabrication und
Oelreinigung. Auf den Standpunct des Jahres, 1852, gebracht
von Emanuel Schreiber.*
16mo. 267 pp., XIV. plates. Weimar, 1853.
- FORBES, James D. *Occasional Papers on the Theory of Glaciers.*
8vo. 278 pp. Edinburgh, 1859.
- FORD, A. B. & Co. *The Machinist. An Index to Various Manu-
facturing Industries throughout the Country.*
4to. 135 pp. New-York, 1873.
- FORTSCHRITTE der Physik. *See, under Journals, Jahresbericht über
die.*
- FOSTER, J. W., and Whitney, J. D. *Reports on the Geology and
Topography of a portion of the Lake Superior Land District.*
Part I. The Copper Lands. 8vo. 224 pp., IV. Maps.
1850.
Part II. The Iron Region and General Geology. 406 pp.,
XXXIV. plates. 1851. 2 vols. 8vo. Washington.
- FOURCROY, A. F. *Éléments d'Histoire Naturelle et de Chemie.*
5 vols. 12mo. Paris, 1793.
- FOWNES, George. *A Manual of Elementary Chemistry. Seventh
edition.* 16mo. 726 pp. London, 1858.

- FOWNES, George. A Manual of Elementary Chemistry. Eleventh edition. Revised by Henry Watts.
12mo. 1026 pp. London, 1873.
- Chemistry as Exemplifying the Wisdom and Beneficence of God. Actonian Prize Essay. First edition.
12mo. 158 pp. New-York, 1844.
- FRANCIS, G. W. Chemical Experiments.
8vo. 250 pp. London, 1858.
- FRANCIS, James B. Lowell Hydraulic Experiments.
4to. 251 pp., XXIII. plates. New-York, 1868.
- FRANÇOIS, J. Recherches sur le Gisement et la Traitement Direct des Minerais de Fer. 4to. 404 pp. Paris, 1843.
- FRANKE, Dr. Technological Dictionary. English, German, French. 8vo. 616 pp. New-York, 1855.
- FRANKENHEIM, M. L. Zur Krystallkunde.
8vo. 214 pp. Leipsig, 1869.
- FRANKLAND, E. Lecture Notes for Chemical Students. Vol. I.
12mo. 220 pp. London, 1870.
- FRANKLYN, Benjamin. Essays and Letters on Philosophical Subjects. 8vo. 477 pp. Philadelphia, 1808.
- Journal. *See under Journals.*
- FREEDEN, W. v. Die Praxis der Methode der Kleinsten Quadrate für die Bedürfnisse der Anfänger. Vol. I., Pamphlets. Octavo series. 8vo. 114 pp. Braunschweig, 1863.
- FREMONT, J. C. Report of the Exploring Expedition to the Rocky Mountains in the year 1842, and to Oregon and North California in the years 1843-1844.
8vo. 693 pp. Washington, 1845.
- FRENCH, B. F. History of the Rise and Progress of the Iron Trade in the United States. 8vo. 179 pp. New-York, 1859.
- FRESENIUS, C. Remegius. A System of Instruction in Qualitative Chemical Analysis. Fourth edition. Edited by J. Lloyd Bullock. 8vo. 310 pp. London, 1855.
- The same. Edited by Samuel W. Johnson. 8vo. 434 pp. New-York, 1872.
- A System of Instruction in Quantitative Chemical Analysis. Edited by J. Lloyd Bullock. Second edition. 8vo. 624 pp. London, 1854.
- The same. Fifth English, from the Fifth German edition. Translated by A. Vacher. 8vo. 377 pp. London, 1870.
- The same. Translated from the Fifth German edition, by A. Vacher. 8vo. 791 pp. London, 1873.
- The same. Edited by Samuel W. Johnson. 8vo. 631 pp. New-York, 1871.
- Elementary Instruction in Chemical Analysis. Edited by J. Lloyd Bullock. 8vo. 284 pp. New-York, 1844.
- Geschichte des Chemischen Laboratoriums zu Wiesbaden, Zur Feier des 25 Jährigen Bestehens der Anstalt. 8vo. 32 pp. Wiesbaden, 1873.
- FRESENIUS' Zeitschrift. *See, under Journals, Zeitschrift für Analytische Chemie.*

- FISCHBACH, H. *Katechismus der Forst Botanik.*
12mo. 232 pp. Leipsig, 1862.
- FRYATT, H. N. *Agriculture, its Essentials and Non-Essentials.*
Including an Examination of the Properties of Guano and
other manures. 8vo. 48 pp. New-York, 1854.
- FUCHS, C. W. C. *Anleitung zum Bestimmen der Mineralien.*
8vo. 144 pp. Heidelberg, 1868.
- *Die Künstlich Dargestellten Mineralien, nach G. Rose's*
Krystallo-chemischen Mineral System geordnet.
4to. 174 pp. Haarlem, 1872.

G.

- GABB, W. M. *See under* Whitney, J. D.
- GAETSCHEMAN, Moritz F. *Anleitung zur Grubenmauerung.*
4to. 188 pp., XXXV. plates. Schemnitz, 1831.
- *Die Aufbereitung.* 2 vols., text and plates. Leipsig, 1872.
- *Die Auf und Untersuchung von Lagerstätten Nutzbarer*
Mineralien. 8vo. 480 pp. Freiberg, 1856.
- *Die Grubenzimmerung.* Erste Abtheilung, 8vo. 125 pp.,
VI. plates. Freiberg, 1872. Zweite Abtheilung, 8vo.
134 pp., XV. plates. Freiberg, 1873.
- *Die Lehre von den bergmännischen Gewinnungsarbeiten.*
8vo. 788 pp. Freiberg, 1846.
- *Sammlung Bergmännischer Ausdrucker.*
12mo. 90 pp. Freiberg, 1859.
- GALLEOTTE, H. *Mémoire sur la Constitution Geognostique de la*
Province de Brabant. 4to. 167 pp.
- GALLOWAY, R. *A Manual of Qualitative Analysis.*
12mo. 443 pp. London, 1870.
- *The First Step in Chemistry.* Fourth edition.
12mo. 477 pp. London, 1868.
- *The Second Step in Chemistry.*
12mo. 774 pp. London, 1864.
- GALTON, Capt. D. *Report relating to Railways, for year 1858.*
2to. 150 pp. London, 1859.
- GAMBRESY, A. *Dictionnaire Minier et Metallurgique.*
12mo. 203 pp. Paris, 1868.
- GAMOND, Thomé de, and Belly, Felix. *Carte d'Étude pour le Trace*
et le Profil du Canal de Niagara precedé de Documents
publié sur cette question.
4to. 90 pp., with a map. Paris, 1858.
- GANNET, Henry. *See under* United States Geological Survey of
the Territories.
- GANOT. *An Introductory Course of Natural Philosophy.* Edited
by William G. Peck. 12mo. 480 pp. New-York, 1860.
- *An Elementary Treatise on Physics.* Translated by E. At-
kinson. 8vo. 780 pp. London, 1863.
- *The same as above.* 8vo. 859 pp. New-York, 1873.

- GARDNER, D. P. An Introductory Lecture on the Relations of Chemistry to the Vital Forces, delivered in the Philadelphia College of Medicine, Philadelphia, 1847. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 11 pp. Philadelphia, 1848.
- GASSE, L. Katechismus der Electricischen Telegraphie. 12mo. 372 pp. Leipsig, 1870.
- GAUSS, F. G. Fünfstellige vollständige Logarithmische und Trigonometrische Tafeln. Third edition. 8vo. 141, 43 pp. Berlin, 1873.
- Vierstellige Logarithmisch-Trigonometrische Handtafel. 5 Tables. Berlin, 1870.
- GEDDES, George. Annual Report of the Superintendent of the Onondaga Salt Springs. Vol. XVI., Pamphlets. Octavo series. 8vo. 35 pp. Albany, 1866.
- GEDENKBUCH zur Hundertjährigen Gründung der K. ung. Berg-u. Forstakademie in Schemnitz, 1770–1870. 8vo. 389 pp. Schemnitz, 1871.
- GEIGER's Journal für Pharmacie. *See, under Journals*, Journal für Pharmacie.
- GEINITZ, H. B. Darstellung der Flora des Hainischer-Ebersdorfer und des Flocher Kohlenbassins. 8vo. 80 pp., text; Atlas, XIV. plates. Leipsig, 1854.
- Das Königlich Mineralogische Museum in Dresden. Vol. I., Pamphlets. Duodecimo series. 12mo. 110 pp., II. plates. Dresden, 1858.
- Die Leitpflanzen des Rotliegenden und des Zechsteingebirges oder der permischen Formation in Sachsen. Vol. VII., Pamphlets. Quarto series. 4to. 27 pp., II. plates. Leipsig, 1858.
- Geognostisch Darstellung der Steinkohlen Formation in Sachsen. 2 vols. 2to., text and plates. Leipsig, 1856.
- GENERAL Meteorological Instructions issued by the War Department, Washington, D. C. 8vo. 12 pp. Washington, 1868.
- GÉNIEYS, R. Recueil de Tables à L'Usage des Ingénieurs. 8vo. 269 pp. Paris, 1835.
- GENTELE, J. G. Lehrbuch der Farbenfabrikation. 8vo. 351 pp. Braunschweig, 1860.
- GENTH, F. A. Contributions to Metallurgy. No. 1, Analysis of Chinese Coins. Vol. VII., Pamphlets. Octavo series. 8vo. 6 pp.
- Contributions to Mineralogy Vol. XI., Pamphlets. Octavo series. 8vo. 13 pp. 1857
- The same as above. Vol. XI., Pamphlets. Octavo series. 8vo. 10 pp. 1859.
- The same as above. Vol. X., Pamphlets. Octavo series. 8vo. 17 pp. 1868.
- The same as above. Vol. XII. Pamphlets. Octavo series. 8vo. 18 pp. Philadelphia, 1862.
- On Tetradymite. Reply to Dr. C. T. Johnson, of Boston. Vol. XI., Pamphlets. Octavo series. 8vo. 3 pp. 1861.
- Re-examination of the Tetradymite, (Bornite-Jackson,) from Field's Gold Mine, Georgia. Vol. XI., Pamphlets. Octavo series. 8vo. 4 pp. 1860.

GEOGRAPHICAL and Geological Explorations and Surveys West of the One Hundredth Meridian. *First Lieut.* George M. Wheeler, in charge.

Cope, E. D. Systematic Catalogue of Vertebrata of the Eocene of New-Mexico, collected in 1874.

8vo. 37 pp. Washington, 1875.

Kampf, F., and Clark, J. H. Report upon the Determination of the Astronomical Co-Ordinates of the Primary Stations at Cheyenne, Wyoming Territory, and Colorado Springs, Colorado Territory, made during the years 1872 and 1873.

4to. 82 pp. Washington, 1874.

Watson, S., and Rothrock, J. T. Catalogue of Plants collected in the years 1871, 1872 and 1873, with Descriptions of New Species.

8vo. 62 pp. Washington, 1874.

White, C. A. Preliminary Report upon Invertebrate Fossils collected by the expeditions of 1871, 1872 and 1873, with Descriptions of New Species.

8vo. 27 pp. Washington, 1874.

Yarrow, H. C., and Henshaw, H. W. Report Upon and List of Birds collected in 1872.

8vo. 148 pp. Washington, 1874.

Report of Progress in 1872.

4to. 56 pp. Washington, 1874.

GEOLOGICAL Magazine. *See under Journals.*

—— Survey of the State of California. *See under* Whitney, J. D.
—— of Canada. Logan, W. E., Director.

Annual Report of Progress for the years 1844, 1848, 1849, 1850, 1851, 1852.

6 Pamphlets. 8vo. Montreal, 1845-1853.

—— Report of Progress for the year 1857.

8vo. 240 pp. Toronto, 1858.

—— Report of Progress for the year 1858.

8vo. 263 pp. Montreal, 1859.

—— Report of Progress from its Commencement to 1863.

8vo. 983 pp. 4to., maps and sections. Montreal, 1863.

—— Report of Progress from 1863 to 1866.

8vo. 321 pp. Ottawa, 1866.

—— Selwyn, A. R. C., Director.

A List of the Publications of the Survey.

8vo. 7 pp. Montreal, 1873.

—— Billings, E. Palæozoic Fossils. Vol. II., plates. Part 1.

8vo. 144 pp., IX. plates. Montreal, 1873.

—— Dawson, J. W. Report on the Fossil Plants of the Lower Carboniferous and Millstone Grit Formations of Canada.

8vo. 47 pp., X. plates. Montreal, 1873.

—— Report of Progress from 1866 to 1869.

8vo. 475 pp., V. maps. Montreal, 1870.

—— Report of Progress for 1870-1871.

8vo. 351 pp. Ottawa, 1872.

—— Report of Progress for 1871-1872.

8vo. 154 pp. Montreal, 1872.

GEOLOGICAL Survey of Canada. Dawson, J. W.

Report of Progress for 1872-1873.

8vo. 300 pp. Montreal, 1873.

— of Great Britain. The Iron Ores of Great Britain.

Part I. The Iron Ores of the North and North Midland Counties of England. 8vo. 97 pp. London, 1856.

Part II. The Iron Ores of South Staffordshire.

8vo. 164 pp. London, 1858.

— of Victoria.

45 sheets of Maps. Melbourne.

GEOLOGISCHE Karte von dem Niederschlesischen Gebirge Breslau, Glatz, Hirschberg, Liegnitz, Löwenberg, Reinerz, Strehlen, Waldenberg. 9 Charts.

— Karte von Preussen und den Thüringischen Staaten. Charts IV. and V., and 10 descriptive pamphlets. Berlin, 1873.

GEOLOGISCHEN Specialkarte von Preussen, &c.

— Abhandlungen zur Geologischen specialkarte von Preussen und den Thüringischen Staaten. Band I. heft 2.

8vo. 75 pp., I. plate. Berlin, 1874.

— Erläuterungen zur geologischen Specialkarte von Preussen und den Thüringischen Staaten. Blätter Cölleda, Erfurt, Neumark, Petersburg, Grobzig, Sommerda, Stotternheim, Weimar, Zorbis. 9 Pamphlets. Berlin, 1874.

GEOLOGIST, (The.) *See under Journals.*

GEOLOGY and Geologists; or, Visions of Philosophers in the Nineteenth Century. 8vo. 33 pp. London, 1843.

GEORGE, R. A. Description of his Method of Expelling Sulphur from Ores. 8vo. 9 pp.

GERHARDT, C. K. F. Précis d'Analyse Chimique Qualitative. Second edition. 8vo. 699 pp. Paris, 1867.

— and Chancel, G. Précis d'Analyse Chimique Quantitative. Second edition. 8vo. 692 pp. Paris, 1864.

GERLING, C. L. Die Ausgleichungs-Rechnungen der practischen Geometrie oder die Methode der Kleinsten Quadrate.

4to. 404 pp. Hamburg, 1843.

GERNART, J., and Witmeur, H. Les Travaux de Percement du Tunnel sous les Alpes entre Bardonnèche et Modane.

Vol. IV., Pamphlets. Octavo series.

8vo. 76 pp., VII, plates. Brussels, 1869.

GEROLT, F. v. Cartes Geognostiques de Mexique.

4to. 16 pp., VII. plates. Dusseldorf, 1827.

— F. von, and Berghes, Carl de. Geognostische Karte der Vorzüglichsten Bergwerkes-Districte des States von Mexico. 4to. 16 pp., VI. charts. Dusseldorf, 1827.

GESNER, Abraham. A Treatise on Coal, Petroleum and Distilled Oils. 8vo. 181 pp. New-York, 1865.

— The Gold Fields of Nova Scotia. Vol. XIV., Pamphlets. Octavo series. 8vo. 12 pp. New-York, 1862.

GEWERBEHALLE, Die. *See under Journals.*

GEYLER, F. *See under Exposition Universelle de Paris, en 1867.*

GIBBS, G. A Dictionary of the Chinook Jargon. *Smith. Misc. Coll.* 8vo. 51 pp. Washington, 1863.

- GIBBS, Wolcott. Contributions to Analytical Chemistry. No. 1. 6 pp. 1852. Vol. XVII., Pamphlets. Octavo series.
- The same as above. No. 2. 9 pp. 1865.
- Contributions to Chemistry from the Laboratory of the Lawrence Scientific School. Vol. XXXI., Pamphlets. Octavo series. 3 Pamphlets. 8vo. 14, 11, 19 pp. 1864, 1865, 1867.
- On Certain Points in the Theory of Atomicities. Vol. XXIX., Pamphlets. Octavo series. 8vo. 8 pp. 1867.
- On the Atomic Weights of the Elements. 8vo. 6 pp. 1861.
- On the Construction of a Normal Map of the Solar Spectrum. Vol. V., Pamphlets. Octavo series. 8vo. 10 pp. 1867.
- On the Rational Constitution of Certain Organic Compounds. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 20 pp. 1858.
- On the Theory of the Polyacid Bases. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 11 pp.
- Remarks on the Atomic Weights of the Elements. Vol. XXXI., Pamphlets. Octavo series. 8vo. 6 pp. 1861.
- Remarks on the Theory of Compound Salt Radicals. 8vo. 4 pp. New-York, 1843.
- Report on the Recent Progress of Organic Chemistry, made to the American Association for the Advancement of Science, August, 1855. Vol. XXVIII., Pamphlets. Octavo series.
- Researches on the Platinum Metals. Vol. XXXI., Pamphlets. Octavo series. 3 Pamphlets. 3, 8, 20 pp. 1860, 1861, 1862.
- and Genth, F. A. Researches on the Ammonia-Cobalt Bases. 4to. 67 pp. Washington, 1856.
- GIBSON, R. The Theory and Practice of Surveying. 8vo. 408 pp. New-York, 1834.
- GILBERT. Essai sur L'Art de la Navigation par la Vapeur. 4to. 58 pp. Paris, 1820.
- GILL, Theodore. Arrangement of the Families of Fishes, or Classes Pisces, Marsipobranchii, and Leptocardii. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* 8vo. 48 pp. Washington, 1872.
- Arrangement of the Families of Mammals, with Analytical Tables. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* 8vo. 98 pp. Washington, 1872.
- Arrangement of the Families of Mollusks. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Pamphlets. 8vo. 49 pp. Washington, 1871.
- Th. Handbuch für Eisen-und Stahlarbeiter. 12mo. 88 pp. Quedlinburg, 1834.
- GILLESPIE, W. M. A Treatise on Land Surveying. 8vo. 424 pp. New-York, 1870.
- A Treatise on Levelling Topography and Higher Surveying. Edited by Cady Staley. 8vo. 171 pp. New-York, 1870.
- Subjects and Methods of Instruction in Mathematics as Prescribed for Admission to the Polytechnic School of Paris. Vol. I., Pamphlets. Octavo series. 8vo. 48 pp.

- GILLISS, J. M. *See, under* Washington Astronomical and Meteorological Observations, Appendices to Observations for 1868.
- *See under* United States Naval and Astronomical Expedition to the Southern Hemisphere during the years 1849, 1850, 1851 and 1852; *also under* Washington Astronomical and Meteorological Observations, 1868.
- GILLIES, John R. Tunnels of the Pacific Rail-Road. Vol. IV., Pamphlets. Octavo series. 8vo. 19 pp., I. map. 1870.
- GILLIMAN, A. M. Travels over the Table Lands and Cordilleras of Mexico. 8vo. 455 pp. Philadelphia, 1846.
- GILLINDER, W. T. Treatise on the Art of Glass Making, containing 272 Practical Receipts for Flint, Colored, Crown, German, Sheet, Plate and Bottle Glass, to which is added a Treatise on the Alkalis, Oxides, Silix, &c., used in the Mixing and Coloring of Glass; also, General Instructions for the Planning and Managing of the Flint and Colored Glass Manufacture. Pamphlet. 8vo. Birmingham, 1874.
- GILLMORE, Q. A. A Practical Treatise on Limes, Hydraulic Cements and Mortars. 8vo. 316 pp. New-York, 1870.
- A Report on the Compressive Strength, Specific Gravity and Ratio of Absorption of various kinds of Building-Stone from Different Sections of the United States, tested at Fort Tompkins, Staten Island, N. Y. 8vo. 15 pp., 1 diagram. Washington, 1874.
- GILLON, A. Cours de Metallurgie Générale. 8vo. 262 pp.; Atlas, XII. plates. Liege, 1869.
- GIRARD, C. *See* Baird, S., and Girard, C.; *see, also, under* United States Geological Survey of the Territories.
- GLADSTONE. *See* Brewster and Gladstone.
- GLEPIN, G. De L'Etablissement des Puits des Mines. 3 vols. 8vo. Liege, 1846.
- GLOCKER, E. F. Ueber die Nordischen Geschiebe Oderebene um Breslau. Vol. VII., Pamphlets. Quarto series. 4to. 82 pp. 1853.
- Ueber den Sulphatischen Eisensinter. Vol. II., Pamphlets. Quarto series. 4to. 28 pp., III. plates. 1856.
- Ueber einige Erscheinungen an Kalkspathformen. Vol. VII., Pamphlets. Quarto series. 4to. 24 pp., II. plates. 1851.
- GMELIN, Leopold. Hand Book of Chemistry. Translated by Henry Watts. 17 vols. 8vo. London, 1848 to 1866.
- Handbuch der Anorganischen Chemie. Fifth edition. 5 vols. 8vo. Heidelberg, 1852-1853.
- The same as above. Sechste umgearbeitete Auflage. Erste Band-Erste Abtheilung. Allgemeine Theil. Edited by Dr. Alexander Naumann. Lieferungs, 1 to 5. Zweite Abtheilung. Die Metalloide. Edited by Prof. H. Ritter. Lieferungs, 1 to 8. Zweite Band. Metalle. Edited by Karl Kraut. Lieferungs, 1 to 4. Dritte Band. Die Metalle. Edited by Dr. S. M. Jörgensen. Lieferungs, 1 to 17. 8vo. Leipzig, 1874.
- Handbuch der Organischen Chemie. Vierte Auflage. 2 vols. 8vo. Heidelberg, 1852.

- GOEPPERT, H. R. Der Paleontologie in Schlesien, sowie über fossile leycadeen. Vol. VI., Pamphlets. Quarto series.
4to. 16 pp., IV. plates.
- GOESSMANN, C. A. Contributions to the Chemistry of Common Salt: with particular reference to our Home Resources. Vol. XVI., Pamphlets. Octavo series. 8vo. 12 pp. 1870.
- Contributions to the Chemistry of the Mineral Springs of Onondaga, N. Y. Vol. XXVII., Pamphlets. Octavo series. 8vo. 22 pp. Syracuse, 1866.
- Report on the Brines of Onondaga. Vol. I., Pamphlets. Duodecimo series. 12mo. 11 pp. Syracuse, 1862.
- Report on the Salt Resources of Goderich, Province of Ontario, (Canada West.) Vol. XVI., Pamphlets. Octavo series. 8vo. 18 pp. 1868.
- Salt and its Uses in Agriculture. Vol. XVI., Pamphlets. Octavo series. 24 pp. 1869.
- GOMANOWSKI, G. A Geognostical pamphlet, in Russian. Vol. XXI., Pamphlets. Octavo series. 8vo. 18 pp., IV. maps. St. Petersburg, 1863.
- GOODYEAR, W. A. See Bodeman, Th., and Kerl, Bruno; also, Kerl, Bruno.
- GÖPPERT, H. R. Beiträge zur fossilen und lebenden Flora. Vol. X., Pamphlets. Quarto series. 4to. 20 pp. Breslau, 1860.
- and Romer, F. Bericht über die Thätigkeit der allgemeinen naturwissenschaftlichen Sektion der schlesischen Gesellschaft im Jahre, 1859. Vol. III., Pamphlets. Quarto series. 4to. 16 pp.
- GORANSSON, B. Om Kroppars verkliga värmkapacitet. Vol. I., Pamphlets. Quarto series. 4to. 22 pp. 1870.
- GORUP-BESANEZ, E. von. Anleitung zur qualitativen und quantitativen. Zoochemischen-Analyse. 8vo. 420 pp. Nuremberg, 1854.
- The same as above. Third edition. 8vo. 497 pp. Heidelberg, 1871.
- Chemische Untersuchung des Mineralwassers zu Steben, im Baierischen Voigtlande. Vol. X., Pamphlets. Quarto series. 4to. 30 pp. 1851.
- Lehrbuck der Physiologische Chemie. 8vo. 819 pp. Brunswick, 1862.
- GOSSELET et Malaise, C. Observations sur le terrain silurien de l'Ardenne. 8vo. 17 pp. 1868.
- GOTH, Georg. Vordernberg in der neusten zeit oder geschichtliche Darstellung der Vereinigung der Radgewerker. 8vo. 252 pp. Vienna, 1839.
- GOTTSCHALK, C. G. Die Grundlagen des Rechnungswesens. 8vo. 465 pp. Leipzig, 1865.
- GOULD, Augustus A. See Dewey, Chester.
- B. A. Reduction of the Observations of the Fixed Stars, made by Joseph Le Paute d'Agelet at Paris during the years 1783-1785, with a Catalogue of the Corresponding Mean Places referred to the Equinox of 1800. 0. 4to. 261 pp.

- GOULD and Curry Silver Mining Company *vs.* North Potosi Gold and Silver Mining Company. Opinion of Referee.
8vo. 12 pp. Virginia, N. T., 1864.
- GRAHAM, Thomas. Researches on the Arseniates, Phosphates and Modifications of Phosphoric Acid. Vol. V., Pamphlets. Quarto series
4to. 22 pp. London, 1833.
- GRAY, Asa. Introduction to Structural and Systematic Botany. Fifth edition. 8vo. 555 pp. New-York, 1869.
- Manual of Botany of the Northern United States. Fifth edition. 8vo. 703 pp. New-York, 1870.
- Sequoia and its History. An Address before the American Association for the Advancement of Science, delivered at a meeting held at Dubuque, Iowa, August, 1872.
8vo. 20 pp. Salem, 1872.
- GREAT Comet, (The,) of 1861. 8vo. 9 pp. Washington, 1861.
- GREEN, Jacob. Chemical Diagrams; or, Concise Views of many Interesting Changes produced by Chemical Affinity.
16mo. 90 pp. Philadelphia, 1837.
- GREENWELL, G. C. A Practical Treatise on Mining Engineering. Second edition.
2 vols. 4to. text; Atlas, LXIV. plates. London, 1870.
- GREENWOOD, George. Rain and Rivers; or, Hutton and Playfair against Lyell and all comers. Second edition.
8vo. 237 pp. London, 1866.
- GREGG, R. P., and Lettson, W. G. Manual of Mineralogy of Great Britain and Ireland. 8vo. 483 pp. London, 1858.
- GREGORY, W. Handbook of Organic Chemistry.
8vo. 627 pp. London, 1856.
- GREEN's Journal der Physik; *and* Gren's Neues Journal der Physik.
See under Journals.
- GRETSCHEL, Heinrich. Katechismus der Meteorologie.
24mo. 168 pp. Leipzig, 1867.
- Katechismus der Physik. 24mo. 244 pp. Leipzig, 1865.
- GRIFFIN, J. J. A System of Crystallography, with its Applications to Mineralogy. Part I. Principles of Crystallography. Part II. Crystallography applied to Mineralogy.
8vo. 346, 143 pp. Glasgow, 1841.
- The Radical Theory in Chemistry.
12mo. 575 pp. London, 1858.
- GRIGLIETTA, C. Electro-Magnetism. A Brief Essay or Informal Lecture on Electro-Magnetism, with a full description of Models of Davenport's Machines, &c.
8vo. 12 pp. Philadelphia, 1838.
- GRIMM, Johann. Die Lagerstätten der Nutzbaren Mineralien.
8vo. 233 pp. Prag, 1869.
- Grundzüge der Geognosie für Bergmänner.
8vo. 360 pp. Prag, 1856.
- GRISEBACH, A. Grundriss der Systematischen Botanik.
8vo. 180 pp. Gottingen, 1854.
- GROSSMAN, M. A Practical and Theoretical Treatise on the Detached Lever Escapement.
8vo. 178 pp., text; Atlas, 4to. XX. plates. Leipzig, 1866.

- GROTH, P. Tabellarische Übersicht der einfachen Mineralien nach ihren Krystallographischen-Chemischen Beziehungen.
8vo. 120 pp. Brunswick, 1874.
- GROTHER, Hermann. Die Brennmaterialien und die Feueranlagen für Fabrik, Gewerbe und Haus.
8vo. 412 pp., LXXI. plates. Weimar, 1870.
- Katechismus der Bleicherei, Färberei und des Zeugdruckes.
12mo. 234 pp. Leipsig, 1862.
- Katechismus der Spinnerei, Weberei und Appretur.
24mo. 144 pp. Leipsig, 1861.
- GRUETZNER, A. Die Augustinische Silber-Extraction in ihrer Anwendung auf Hüttenproducte und Erze.
12mo. 174 pp., IV. plates. Brunswick, 1851.
- GRUNER, L. Étude des Bassins Houilliers de la Creuse.
4to. 204 pp. Paris, 1868.
- and LAN. État present de la Metallurgie du Fer en Angleterre.
8vo. 850 pp., IX. plates. Paris, 1862.
- Mémoire sur le Dedoublement de L'Oxide de Carbone sous l'action combinée du Fer Metallique et des Oxydes de ce Métal. Vol. II., Pamphlets. Quarto series.
4to. 66 pp. Paris, 1872.
- GRUTZNER, August. Die Augustinsche Silber-Extraction in ihrer anwendung auf Hüttenproducte und Erze.
8vo. 174 pp., IV. plates. Brunswick, 1851.
- GUARINI, Palmieri and Scacchi. Memoria sullo incendio Vesuviano.
4to. 207 pp. Naples, 1855.
- GUILEMIN, Amedée. The Heavens. An Illustrated Hand-book of Popular Astronomy. Edited by Norman Lockyer. Fourth edition, revised by R. A. Proctor. *American reprint.*
8vo. 432 pp. New-York, 1871.
- GUINOTTE, Lucien. Étude Générale sur la Detente Variable et spécialement sur son application aux Machines à Vapeur.
8vo. 12 pp. Liege, 1872.
- GUMBEL, W. Theodor. Die Fünf Würfelschnitte. Ein Versuch die verschiedenen Krystallgestallten in einen einigen Zusammenhang zu bringen. Vol. II., Pamphlets. Quarto series.
4to. 19 pp., II. plates. Landau, 1852.
- The Laurentian Rocks of Bavaria. Vol. XIII., Pamphlets. Octavo series.
8vo. 24 pp., I. plate. 1866.
- GUNTHER, J. R. Theorie neuer Erz-Separations-Methoden.
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- GURLT, A. Bemerkungen über die neueren Fortschritte des Kupferhüttenprozesses.
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- De la Fabrication de la Fonte et du Fer au Moyen des Gaz. Vol. VIII., Pamphlets. Octavo series.
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- Die Deutsche Steinkohle. 12mo. 51 pp. Bremen, 1868.
- Übersicht der pyrogeneten Künstlichen Mineralien.
8vo. 100 pp. Freiberg, 1857.
- Q. Die Roheisenerzeugung mit Gas oder die Verhüttung der Eisenerze mit indirecter Benutzung des Brennmaterials
8vo. 30 pp., I. plate. Freiberg, 1857.

- GUTBIER, A. von. Ueber einen fossilen Farrenstam *Caulopteris Freieslebeni* aus dem Zwickauer Schwartzkohlen-gebirge. Vol. XXII., Pamphlets. Octavo series. 8vo. 16 pp. Zwickau, 1872.
- GUYOT, Arnold. Directions for Meteorological Observations and the Registry of Periodical Phenomena. *Smith. Misc. Coll.* 8vo. 70 pp. Washington, 1869.
- On the Appalachian Mountain System. 8vo. 31 pp., with a map. New-Haven, 1861.
- Tables, Meteorological and Physical, prepared for the Smithsonian Institution. Second edition. *Smith. Misc. Coll.* 8vo. 634 pp. Washington, 1870.
- GYSSER, R. Der Torf. 8vo. 46 pp. Weimar, 1864.

H.

- HABEL, M. A. Voyages dans la partie tropicale des deux Ameriques. Vol. X., Pamphlets. Quarto series. 4to. 4 pp. 1869.
- HAGEN, G. Grundzüge der Wahrscheinlichkeits-Rechnung. 12mo. 198 pp. Berlin, 1837.
- Hermann. Synopsis of the Neuroptera of North American Species. *Smith. Misc. Coll.* 8vo. 347 pp. Washington, 1861.
- HAGER, Albert D. See Hitchcock, Edward.
- HAGGE, R. Mikroskopische Untersuchungen über Gabbro und verwandte Gesteine. 8vo. 62 pp. Kiel, 1871.
- HAIDINGER, Wilhelm. Die Krystalle des Essigsäuren Manganoxyduls. Vol. IX., Pamphlets. Octavo series. 8vo. 10 pp. 1855.
- Handbuch der Bestimmenden Mineralogie. 8vo. 630 pp. Vienna, 1845.
- Herapathit-Zangen. Vol. XII., Pamphlets. Octavo series. 8vo. 6 pp. 1855.
- Mineralogical Account of the Ores of Manganese. Vol. IX., Pamphlets. Quarto series. 4to. 24 pp., I. plate. Edinburgh, 1827.
- Oberflächen-und Körperfarben von Wöhlers Jod-Tellur-Methyl. Vol. XXI., Pamphlets. Octavo series.
- On Isopyre, a new Mineral Species. Vol. XII., Pamphlets. Octavo series. 8vo. 2 pp. 1827.
- On Polyhalite. Vol. X., Pamphlets. Octavo series. 8vo. 16 pp.
- See, under Journals, Berichte über die Mittheilungen von Freunden der Naturwissenschaft; also, Naturwissenschaftlicher Abhandlungen.
- HAINDL, S. Die Maschinenkunde und Maschinenzeichnung. 2 vols. 4to. text and plates. Munich, 1843.
- HALL, A. See under Washington Astronomical and Meteorological Observations.
- James. Catalogue of the Historical and Antiquarian Collection in the State Cabinet, N. Y. 8vo. 20 pp.
- Contributions to Paleontology, 1858 and 1859. Vol. XXIII., Pamphlets. Octavo series. 8vo. 73 pp. 1859.

- HALL, James. *See* Natural History of the State of New-York. Part IV., Vols. 4, 6; *also*, United States and Mexican Boundary Survey. Part I.
- and Whitney, J. D. Report on the Geological Survey of the State of Iowa, embracing the Results of Investigations made during portions of the years 1855, 1856 and 1857. Vol. I., Part I. Geology. Part 2. Palæontology.
2 vols. 4to. 1858.
- Report on the Geological Survey of the State of Wisconsin.
2 vols. 4to. 1862.
- HALLIWELL, J. O. A few Notes on the History of the Discovery of the Composition of Water. Vol. XXXI., Pamphlets. Octavo series.
8vo. 8 pp. London, 1840.
- HALLOY, J. J. d'Omalus d'. Elements de Geologie.
8vo. 742 pp. Paris, 1835.
- Memoires pour servir à la Description Geologique des Pays-Bas de la France et de Quelques Contrées Voisines.
12mo. 387 pp., II maps. Namur, 1828.
- Precis élémentaire de Geologie.
8vo. 836 pp. Brussels, 1868.
- Sur les Échantillons de Phosphate de Chaux. 8vo. 4 pp.
- HAMM, Wilhelm. Katechismus der Ackerbau-Chemie der Bodenkunde und Düngerlehre. 24mo. 116 pp. Leipsig, 1871.
- Katechismus der Drainirung.
24mo. 88 pp. Leipsig, 1858.
- HAMPE, W. Tafeln zur qualitativen chemischen Analyse.
8vo. XI. Tables. Clausthal, 1868.
- HANDBOOK (The) of Turning. 12mo. 144 pp. London, 1859.
- HANDBUCH für Auswanderer nach Queensland, (Australien.)
Pamphlet. 12mo. 1873.
- HANDL, Alois, and Weiss, Adolph. Untersuchungen über den Zusammenhang in den Änderungen der dichten und brechungsexponenten in gemengen von Flüssigkeiten und Verbindungen von Gasen. Vol. V., Pamphlets. Octavo series.
8vo. 55 pp., I. plate. Vienna, 1858.
- HANLE'S Magazin für Pharmacie. *See, under Journals*, Magazin für Pharmacie.
- HANNAH, Richard. A Succinct Account of the Lime Rocks of Plymouth. 8vo. 71 pp., XI. plates. Plymouth.
- HANSARD, Thomas C., Tomlinson, Charles, and others. History of the Processes of Manufacture and uses of Printing, Gas-Lights, Pottery, Glass and Iron. *From the Encyclopedia Britannica*.
12mo. 392 pp. New-York, 1864.
- HANTKEN, Maxm. v. Der Ofner Mergel.
8vo. 24 pp. Prest, 1873.
- HARDER, P. E. Das Molekellärgesetz mit besonder Anwendung auf das Wasser, den Wasserdampf und die Luft.
8vo. 168 pp. Hamburg, 1866.
- HARDWICK, T. F. Manual of Photographic Chemistry. Seventh edition.
8vo. 593 pp. London, 1864.
- HARDWICKE'S Science Gossip. *See under Journals*.

- HARE, Robert. An Effort to Refute the Arguments Advanced in the Amphide Salts, of Radicals, consisting, like Cyanogen, of More Than One Element. Vol. XXIX., Pamphlets. Octavo series. 8vo. 23 pp. Philadelphia, 1842.
- Objections to the Nomenclature of the celebrated Berzelius, with Suggestions respecting a Substitute. Vol. XXIX., Pamphlets. Octavo series. 8vo. 24 pp. Philadelphia, 1840.
- HARKNESS, W. R. *See under* Washington Astronomical and Meteorological Observations, 1870.
- HARKORT, Edward. Die Probirkunst mit dem Löthrohre. Heft 1. Die Silberproben. 12mo. 107 pp., III. plates. Freiberg, 1827.
- HARRIS, T. W. *See* Dewey, Chester.
- HARRISON, A. M. A Treatise on the Plane Table and its Use in Topographical Survey. *From the Coast Survey Report for* 1865. 4to. 29 pp., II. plates. Washington, 1865.
- HARTMANN, Carl. Berg-und Huttenmännischer Atlas. 4to. text; Atlas, XLII. plates. Weimar, 1860.
- Das Kupfer und das Zink. 8vo. 328 pp. Weimar, 1863.
- Der practische Puddel-und Walzmeister. 12mo. 427 pp. Weimar, 1861.
- Der heutige Standpunkt des deutschen Eisenhüttengewerbes. 8vo. 263 pp. Leipsig, 1861.
- Der innern Gebirgswelt. 8vo. 312 pp. Stuttgart, 1838.
- Der treue Führer beim Schürfen und bei Bohrarbeit. 12mo. 232 pp. Weimar, 1856.
- Der wohlunterrichtete Hohofen-und Hammemeister. 12mo. 881 pp., XIV. plates. Weimar, 1852.
- Die Mineralischen Brennstoffe Steinkohlen, Braunkohlen und Torf. 8vo. 122 pp. Halle, 1856.
- Die Probirkunst. 12mo. 365 pp. Weimar, 1862.
- Die treue Führer beim Schürfen und bei der Bohrarbeit. 12mo. 232 pp., VI. plates. Weimar, 1856.
- Grundriss der Eisenhüttenkunde. 8vo. 603 pp. Berlin, 1852.
- Handbuch der Bergbau-und Hüttenkunde. 4to. 1313 pp. text; Atlas, XLV. plates. Weimar, 1858.
- Handbuch der Eisengiesserei. 12mo. 603 pp. text; Atlas, XXVII. plates. Weimar, 1863.
- Handbuch der Eisenhüttengewerbskunde. 8vo. 614 pp., XVII. plates. Leipsig, 1860.
- Handbuch der Metallgieserei. 12mo. 367 pp. text; Atlas, XI. plates. Weimar, 1863.
- Handbuch der Mineralogie. 2 vols. 8vo. Weimar, 1843.
- Handbuch der praktische Metallurgie. 2 vols. 12mo. text; Atlas, XVII. plates. Weimar, 1863.
- Handbuch des Steinkohlen-Bergbaues. *Incomplete.* 4to. 120 pp. text; Atlas, X. plates. Weimar, 1855.
- Practische Eisenhüttenkunde. 3 vols. 4to. Weimar, 1852.

- HARTMANN, Carl. *Practisches Handbuch der Rohr-und Stabeisen-Fabrikation in leichtfaszlichen Vorträge.*
8vo. 464 pp., I. plate. Leipzig, 1857.
- *Practisches Handbuch der Stahlfabrikation.*
12mo. 505 pp. Weimar, 1861.
- *Ueber die Eisen Kupfer Zinc und Bleihütten-Betrieb.*
Drittes heft. 8vo. 188 pp., IV. plates. Leipzig, 1850.
- *Ueber die mechanische Aufbereitung der silberhältigen Bleierze.*
8vo. 335 pp. Weimar, 1858.
- *Vade mecum für den Practischen Hüttenmann.*
12mo. 342 pp. Hamm, 1863.
- *Vade mecum für den practischen Eisenhüttenmann.*
12mo. 415 pp., V. plates. Hamm, 1863.
- *Vollständiges Handbuch der Eisengiesserei.*
8vo. 298 pp., XI. plates. *Ergänzungsheft.* 72 pp., II. plates. Freiberg, 1847.
- *See, also, Henvaux, D.; De Play, F.; Ponson, A. T.; Rivot, E. L., and Valerius, B.*
- *Hugo. Untersuchungen mit dem Löthrohr.*
4to. 39 pp., XLII. plates. Leipzig, 1862.
- HARTNER, Friedrich. *Handbuch der niederen Geodäsie, nebst einem Anhang über die Elemente der Markscheidekunst.*
8vo. 693 pp. Vienna, 1864.
- HARTT, Ch. Fred. *Contributions to the Geology and Physical Geography of the Lower Amazons. The Ereré-Monte-Alegro District and the Table-Topped Hills.*
8vo. 8 pp. Buffalo, 1874.
- HARTUNG, George. *Die Azoren in ihrer Ausseren Erscheinung und nach ihrer Geognostischen Natur. Mit Beschreibung der Fossilen Reste von H. G. Brown.*
8vo. 350 pp. text; Atlas, XIX. plates, I. map. Leipzig, 1860.
- HARVÉ, A. *Alliages Métalliques.* 12mo. 458 pp. Paris, 1839.
- HARVEY, George. *A Treatise on Ship Building.*
4to. 112 pp., XIII. plates. Edinburgh, 1828.
- HASEMANN, Theodor and A. *Handbuch der Toxicologie.*
8vo. 978 pp. Berlin, 1862.
- HASKOLL, W. D. *The Engineers', Mining Surveyors' and Contractors' Field-Book.* 8vo. 189 pp. London, 1866.
- HASSALL, A. H. *Food and its Adulterations.*
8vo. 659 pp. London, 1855.
- HASSENFRATZ, J. H. *La Siderotechnie, ou L'Art de Traiter Les Minerais de Fer pour en obtenir de la Fonte, du Fer, et de L'Acier.* 4 vols. 4to. Paris, 1812.
- *Traité Theoretique et Pratique de l'art de Calciner la Pierre Calcaire.* 4to. 425 pp. Paris, 1825.
- HAUER, Julius Ritter von. *Die Fördermaschinen der Bergwerke.*
8vo. text, 438 pp.; Atlas, XXX. plates. Leipzig, 1871.
- *Die Hüttenwesens-maschinen.*
8vo. 286 pp., XXVIII. plates. Vienna, 1867.
- *Die wichtigen Eisenerz-vorkommen in der Oesterreichischen Monarchie und ihr Metallgehalt.* 8vo. 187 pp. Vienna, 1863.

- HAUER, Julius Ritter von. Notizen über die Krystallisation und Darstellung, einiger Verbindungen. Vol. IX., Pamphlets. Octavo series. 8vo. 12 pp. Vienna, 1860.
- Untersuchungen über den Brennwerth der Braun- und Steinkohlen. 8vo. 272 pp. Vienna, 1862.
- HAUPT, Hermann. Military Bridges, with Suggestions of New Expedients and Constructions for Crossing Streams and Chasms. Including, also, Designs for Tressle and Truss Bridges for Military Rail-Roads. 8vo. 310 pp., LXIX. plates. New-York, 1864.
- The General Theory of Bridge Construction. 8vo. 268 pp. New-York, 1868.
- Theodor. Bausteine zur Philosophie der geschichte der Bergbaues. 8vo. 101 pp. Leipsig, 1865.
- HAUSHOFER, K. Die Constitution der Natürlicher Silicate auf Grundlage ihrer Geologischen Beziehungen. 8vo. 153 pp. Brunswick, 1874.
- HAYDEN, F. V. *See* United States Geological Survey of the Territories.
- HAYES, A. A. On the Native Iron of Liberia. 8vo. 7 pp. Washington, 1855.
- John L. Notes on Indigo. 8vo. 79 pp. Boston, 1873.
- Protection as a Boon to Consumers. An Address delivered before the National Association of Knit Goods Manufacturers, at the Second Annual Meeting in New-York City, May 1, 1867. With a Letter from Mr. Samuel Bachelder to Mr. John L. Hayes. 8vo. 50 pp. Boston, 1867.
- Statement of Facts relative to Canada Wools, and the Manufactures of Worsted. 8vo. 21 pp. Boston, 1866.
- The Angora Goat : its Origin, Culture and Products. 8vo. 38 pp. Boston, 1868.
- The Fleece and The Loom. An Address before the National Association of Wool Manufacturers, at the First Annual Meeting in Philadelphia, Sept. 6, 1865. 8vo. 80 pp. Boston, 1866.
- The Protective Question Abroad, and Remarks at the Indianapolis Exposition. 8vo. 66 pp. Cambridge, 1870.
- The Solidarity of the Industries, as illustrated by the Relations of the Woolen Manufacture. An Address delivered before the Fair of the American Institute, New-York City, October 13, 1870. 8vo. 28 pp. Cambridge, 1870.
- The Wools of the United States. 8vo. 47 pp. Boston, 1872.
- *See* Morrell, D. J. ; *also*, Mudge, E. R.
- HAUSMANN, J. F. L. Handbuch der Mineralogie. 3 vols. 12mo. Gottingen, 1828.
- Neue Beiträge zur metallurgischen Krystallkunde. 4to. 14 pp. Gottingen, 1852.
- Norddeutsche Beiträge zur Berg-und Hüttenkunde. 8vo. 121 pp. Brunswick, 1806.

- HAUSMANN, J. F. L. Reise durch Scandinavien.
5 vols. 8vo. Gottingen, 1811-1818.
- Ueber den gegenwärtigen Zustand und die Wichtigkeit des
Hannoverschen Harzes. 8vo. 411 pp. Gottingen, 1832.
- Untersuchen über die Formen der leblosen Natur.
8vo. 677 pp. Gottingen, 1834.
- HAUY, C. Traité de Cristallographie.
2 vols. 12mo. Paris, 1822.
- Tableau Comparatif des Resultats de la Cristallographie
et de L'Analyse Chimique Relatifment à la Classification des
Mineraux. 12mo. 312 pp., plates. Paris, 1809.
- Traité de Mineralogie.
4 vols. 4to. text; Atlas of plates. Paris, 1801.
- A Letter to Rev. Wm. McLain on the Native Iron of Li-
beria; transmitting a Chemical Analysis. Vol. VIII., Pamphlets.
Octavo series. 8vo. 5 pp. Washington, 1855.
- HEDLEY, J. The Working and Ventilation of Coal Mines.
8vo. 128 pp. London, 1851.
- Traité pratique de L'Exploitation des Mines de Houille.
Traduit par Lambert et Modesse.
8vo. 100 pp. Liege, 1853.
- HEDGES, Isaac A. Sorgo, or the Northern Sugar Plant, with an
introduction by William Clough.
12mo. 204 pp. Cincinnati, 1863.
- HEER, Oswald. Die Urwelt der Schweiz.
8vo. 622 pp. Zurich, 1865.
- HENKELS, J. F. Pyritologia oder Kieselhistorie als des vornehmsten
Minerals. Mit einem Vorrede von Nutzen des Bergwerks.
8vo. 904 pp. Leipsig, 1754.
- HELLMAN, A. Die Petrefacten Thuringens nach dem Materiel des
Herzogl Naturalien-Kabinets in Gotha.
4to. 48 pp., XXIV. plates. Cassel, 1866.
- HENCHLER, E. Die Berg Knappen.
Folio. 12 pp., LXXIV. plates. Dresden, 1857.
- HENRY, Joseph. Contributions to Electricity and Galvanism.
Vol. I., Pamphlets. Quarto series.
4to. 15 pp., I. plate. Philadelphia, 1855.
- Contributions to Electricity and Magnetism. Vol. I., Pamphlets.
Quarto series. 4to. 51 pp. Philadelphia, 1839.
- The same as above. Vol. I., Pamphlets. Quarto series.
4to. 35 pp. Philadelphia, 1841.
- William. The Elements of Experimental Chemistry.
Tenth edition. 2 vols. 8vo. London, 1826.
- HENSHAW, H. W. See under Geographical and Geological Explo-
rations and Surveys West of the One Hundredth Meridian.
- HENVAUX, D. Construction der Walzwerke. Bearbeitet von Dr.
Carl Hartmann. 8vo. 73 pp. Leipsig, 1859.
- HENWOOD, W. J. Address before the Royal Institution of Corn-
wall. Vol. II., Pamphlets. Octavo series.
8vo. 65 pp. Truro, 1871.

- HENWOOD, W. J. Observations on Metalliferous Deposits and on Subterranean Temperature.
8vo. Text, 916 pp. 1 vol. plates and tables. Penzance, 1871.
- HEPPE, Gustav. Die Chemische Reactionen der wichtigsten anorganischen und organischen Stoffe. Tabellen alphabetischer Anordnung. 8vo. 392 pp. Leipzig, 1815.
- HERBICH, Franz. Zur Verbreitung der Eruptivgesteine Siebenbürgens. 16mo. 20 pp. Klausenburg, 1873.
- HÉRDER, v. Erläuterung der vorzüglichsten apparatus zur Erwärmung der Gebläseluft. 8vo. 118 pp. Atlas folio, XXXV. plates. Freiberg, 1840.
- HERRMANN, Friederick. Katechismus der Feldmess Kunst mit Kette, Winkelspiegel und Messtisch. 12mo. 109 pp. Leipzig, 1871.
- Katechismus der Uhrmacherkunst. 12mo. 92 pp. Leipzig, 1863.
- HERSCHEL and Maise. A Manual of Scientific Discovery. 8vo. 429 pp. London, 1859.
- HERZOG, Edmund. Praktische Anleitung zum Höhenmessen mittelst Dosenbarometer, (Barometre aneroide u. Barometre holosterique,) nebst Bemerkungen über generale Tracirung. Vol. II., Pamphlets. Duodecimo series. 12mo. 30 pp. Leipzig, 1873.
- HESSENBERG, F. Mineralogische Notizen. 4to. Frankford, 1861.
- HEULAND, H. Description d'une collection des Minéraux. 3 vols. 8vo. text; 1 vol. 4to. LXXXIII. plates. London.
- HEUSSIE, Jacob. Lehrbuch der Geodäsie. 8vo. 583 pp. London, 1861.
- HEUZE, Eleonore. Katechismus der Kochkunst. 8vo. 135 pp. Leipzig, 1853.
- HEWITT, Abram S. See Exposition Universelle de Paris, en 1867.
- HILGARD, E. W. The Geology and Agriculture of the State of Mississippi. 8vo. 388 pp. Jackson, Miss., 1860.
- HILDEBRANDT, F. Anfangsgründe der Metallurgie. 8vo. 595 pp. Erlangen, 1806.
- HILL, C. J. Afhandlingar om tals visare tite Samenansatta delare. 4to. 18 pp. London.
- Sur une forme générale de developpement et sur les Integrales définies. Vol. X., Pamphlets. Quarto series. 4to. 36 pp.
- HILPERT, J. L. Englisch-Deutsches und Deutsch Englisches Wörterbuch. 4 vols. 4to. Karlsruhe, 1857.
- HINRICHS, Gustavus. The Method of Quantitative Induction in Physical Sciences. A Guide for Students in the Laboratory and Lecture Room. Vol. XXVII., Pamphlets. Octavo series. 8vo. 45 pp. Davenport, Iowa, 1867.
- HINTERBERGER, F. See Bauer, A., and Hinterberger, F.
- HISTOIRE Naturelle de Jura et des Departments Voisins. Tome I. Première Fascicule. Ogerien, Le Frere. Géographie, Physique, Meteorologie, Agriculture, Minerale, Mineralogie, Petrologie et Paleontologie. Deuxième Fascicule. Géologie

- Proprement Dite Appliquée aux Arts, a L'Industrié et surtout a L'Agriculture. Tome II. Michalet, E. Botanique. Tome III. Ogerien, Le Frere. Zoologie Vivante.
4 vols. 8vo. Paris, 1863, 1867.
- HISTORY (The) and Description of Fossil Fuel, &c. See Taylor, J. E. H.
- HITCHCOCK, C. H. First Annual Report upon the Geology and Mineralogy of New-Hampshire. Vol. XIII., Pamphlets. Octavo series.
8vo. 36 pp. Manchester, 1869.
- Report of the Geological Survey of the State of New-Hampshire in 1870. Vol. XIII., Pamphlets. Octavo series.
8vo. 82 pp. Nashua, 1871.
- Report on the Geological Survey of New-Hampshire. Showing its progress during the year 1871. Vol. XIII., Pamphlets. Octavo series.
8vo. 56 pp., I. map. Nashua, 1872.
- See Holmes, E.; also, Hitchcock, Edward.
- Edward. Elementary Geology. Thirteenth edition.
12mo. 424 pp. New-York, 1856.
- Report on the Geology, Mineralogy, Botany and Zoology of Massachusetts.
Part I. Economical Geology.
Part II. Topographical Geology.
Part III. Scientific Geology.
Part IV. Catalogue of Animals and Plants.
8vo. 679 pp. Amherst, 1832, 1833.
- Geology of Massachusetts.
Vol. I. Economical and Scenographical Survey.
Vol. II. Scientific and Elementary Geology.
2 vols. 4to. Amherst and Northampton, 1841.
- Final Report on the Geology of Massachusetts.
4to. 299 pp., XIV. plates. Amherst, 1841.
- Plates Illustrating the Geology and Scenery of Massachusetts.
4to. XIX. plates. 1833.
- Ichnology of New-England. A Report on the Sandstone of the Connecticut Valley, especially its Fossil Footmarks.
4to. 220 pp., LX. plates. Boston, 1858.
- Outline of the Geology of the Globe, and of the United States in Particular. Third edition.
12mo. 136 pp. Boston, 1856.
- assisted by Hitchcock, Edward, Jr., and Charles H.; and Hager, Albert D. Report on the Geology of Vermont, Descriptive, Theoretical, Economical and Scenographical.
Vol. I. Hitchcock, Edward. Preliminary Report, General Principles of Geology, Metamorphism of Rocks, Classification of Rocks.
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- Part 9.* Hager, A. D. Economical Geology of Vermont.
- Part 10.* Physical Geography and Scenery.
2 vols. 4to. Claremont, N. H., 1861.
- HITINGER, Peter. Das Quecksilber-Bergwerk Indrie, von seinern Beginne bis zur Gegenwart. 12mo. 86 pp. Larbach, 1860.
- HOEFER, Ferdinand. Histoire de la Chimie.
8vo. 2 vols. Paris, 1842-1843.
- HOFF, K. E. A. Geschichte der durch überlieferung nachgewissenen Natürlichen Veränderungen der Erdoberfläche.
4 vols. 8vo. Gotha, 1822-1824.
- HOFMANN, Friedrich. Geschichte der Geognosie, und verenderung der Vulkanischen Erscheinungen.
8vo. 596 pp. Berlin, 1838.
- Geognostische Beobachtungen.
8vo. 725 pp. Berlin, 1839.
- HOFFMAN, A. W. Lectures on Chemistry.
8vo. 233 pp. London, 1866.
- Johanes Georgius, and J. B. Bähmer. De Matricibus Metal-
lorum Amphisium Philosophorum Ordinis.
8vo. 96 pp. Leipsig, 1738.
- HOLLENBERG, A. See Daelen, R.
- HOLLMAN, P. J. Mémoire sur L'Équivalent Calorifique de L'Ozone.
Vol. I., Pamphlets. Quarto series. 4to. 78 pp. Utrecht, 1868.
- HOLLUNDER, C. F. Besuch einer Anleitung zur mineralogischen Probirkunst. 3 vols. 12mo. Nuremberg, 1826-1827.
- Tagebuch einer metallurgisch-technologischen Reise.
8vo. 487 pp. Nuremberg, 1824.
- HOLMES, F. S. The Phosphate Rocks of South Carolina and the Great Carolina Marl Bed. 8vo. 87 pp. Charleston, 1870.
- The Post-Pleiocene Fossils of South Carolina.
4to. 122 pp., XXVIII. plates. Charleston, S. C., 1860.
- E., and Hitchcock, C. H. Second Annual Report upon the Natural History and Geology of the State of Maine.
8vo. 447 pp. 1862.
- HOLMSTROM, L. P. Iakttagelser öfver istiden i södra Sverige.
Vol. VII., Pamphlets. Quarto series. 4to. 43 pp., I. Map.
- HOLTSCHL, Josef. Das Höhenmessen mit Metall-Barometern.
8vo. 74 pp. Vienna, 1870.
- HOMANS, J. Smith, Jr. A Cyclopedia of Commerce and Commer-
cial Navigation. 2to. 2007 pp. New-York, 1858.
- HONIG, J. Anleitung zum Studium der Darstellende Geometrie.
2 vols. text and plates. Vienna, 1845.
- HÖRMANN, A. Die Neuen Wasserhaltungs-Maschinen auf den De-
chenschächter bei Saarbrücken, der Tiefbau anlage zu Rü-
dersdorf und der Ferdinandsgrube bei Kättowitz.
2 vols. 4to. text and plates. Berlin, 1874.

- HORSFORD, E. N. Report on an Investigation of the Sources of the Offensive Odors which are ascribed, in a petition by John M. Tayler and others, before the State Board of Health, to the Hog-Slaughtering Establishment of John P. Squire & Co., of East Cambridge. 8vo. 40 pp. Cambridge, Mass., 1873.
- Scientific Researches. Vol. VI., Pamphlets. Octavo series. 8vo. 36 pp. Albany, 1852.
- The Permeability of Metals to Mercury. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 14 pp.
- HOSKOLD, H. D. A Practical Treatise on Mining, Land and Railway Surveying, Engineering, &c. 8vo. 249 pp. London, 1863.
- HOUGH, Franklyn B. Census of the State of New-York for 1865. Prepared from the Original Returns under the Direction of Francis D. Barbour, Secretary of State. 4to. 473 pp. Albany, 1867.
- How, Henry. The Mineralogy of Nova Scotia. 8vo. 217 pp. Halifax, 1869.
- How You Waste Your Fuel and How to Prevent It. A Few Facts on Combustion. Vol. XVI., Pamphlets. Octavo series. 8vo. 12 pp. Worcester, 1866.
- HUBBARD, Prof. *See under* Washington Astronomical and Meteorological Observations.
- HUBBE, H. Reisebemerkingen, hydrotechnischen Inhalts. 4to. 64 pp., XIII. plates. Hamburg, 1844.
- HUBERT, Alois von. Anleitung durch Colorimetrie den Kupperhalt, von Erzen-und Hütten Producten. 8vo. 58 pp. Vienna, 1852.
- HUET, A. *See* Exposition Universelle de Paris, en 1867.
- HUGHES, G. W. Report relative to the working of Copper ore. Vol. VII., Pamphlets. Octavo series. 8vo. 58 pp. Washington, 1844.
- Samuel. A Treatise on Gas Works. 8vo. 336 pp. London, 1866.
- HUGO, Leopold. Essai sur le Geometrie des Cristalloides. 8vo. 16 pp. Paris, 1873.
- Introduction à la Géométrie Descriptive. Des Cristalloides. Vol. I., Pamphlets. Octavo series. 8vo. 19 pp., III. plates. Paris, 1874.
- Les Cristalloides à Directrice Circulaire. 8vo. 40 pp., I. plate. Paris, 1867.
- Les Cristalloides Complexes à Summit Étoile. Vol. I., Pamphlets. Octavo series. 8vo. 24 pp., III. plates. Paris, 1872.
- Théorie des Cristalloides Elementaires. 8vo. 58 pp., IV. plates. Paris, 1867.
- HUMBER, William. A Handy Book for the Calculation of Strains in Girders. 12mo. 71 pp. London, 1868.
- *See* Barlow, Peter.
- HUMBOLDT, Alexander von. Atlas Geographique et Physique du Royaume de la Nouvelle Espagne. Folio. XX. plates and maps. Paris, 1812.

- HUMBOLDT, Alexander von. *Essai Geognostique sur le Gissement des Roches dans les Deux Hemispheres.*
8vo. 379 pp. Paris, 1823.
- *Essai Politique sur le Royaume de la Nouvelle-Espagne.*
Second edition. 4 vols. 8vo. Paris, 1825-1827.
- *Fragmens de Géologie et de Climatologie Asiatique.*
8vo. 2 vols. in 1. 640 pp. Paris, 1831.
- *Kosmos. Entwurf einer physischen Weltbeschreibung.*
4 vols. 24mo. Stuttgart and Augsburg, 1845, 1847, 1850, 1858.
- *Voyage aux Régions Equinoxiales du Nouveau Continent fait en 1799, 1800, 1801, 1802, 1803 et 1804, par Al. de Humboldt et A. Bonpland avec une Atlas, Geographique et Physique.*
13 vols. 8vo. Paris, 1816-1831.
- HUMPHREYS, A. A. *See under* Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian.
- *See, also, under Journals, Report of the Chief of Engineers.*
- and Abbot, H. L. *Report upon the Physics and Hydraulics of the Mississippi River.*
4to. 602 pp., XX. plates. Philadelphia, 1861.
- HUNRICHS, J. W. A. *Practische Anleitung zum Deich-Siel-und Schlengen-Bau.*
2 vols. 12mo. Bremen, 1770.
- HUNT, Robert A. *A Descriptive Guide to the Museum of Practical Geology, with notices of the Geological Survey of the United Kingdom, the Government School of Mines, and the Mining Record Office.*
12mo. 298 pp. London, 1859.
- *Mineral Statistics of the United Kingdom of Great Britain and Ireland, for the year 1858. Part I.*
8vo. 190 pp. London, 1859.
- T. Sterry. *Bitumens and Pyroschists.* 8vo. 15 pp.
- *Chemical Geology. Replies to the Criticisms of Mr. David Forbes.* Vol. XX., Pamphlets. Octavo series.
8vo. 31 pp. Montreal, 1867.
- *Contributions to Lithology.* Vol. II., Pamphlets. Duodecimo series.
12mo. 51 pp. Montreal, 1864.
- *Contributions to the Chemical and Geological History of Bitumens and of Pyroschists or Bituminous Shales.* Vol. XXV., Pamphlets. Octavo series.
8vo. 15 pp. 1863.
- *Contributions to the Chemistry of Natural Waters.* Vol. XVII., Pamphlets. Octavo series. 8vo. 54 pp. Montreal, 1865.
- *Contributions to the History of Lime and Magnesia Salts.* Vol. XXIX., Pamphlets. Octavo series.
8vo. 19 pp. 1866.
- *Esquisse Geologique du Canada suivie d'un Catalogue Descriptif de la Collection de Cartes et Coupes géologiques, Livres imprimés, Roches, Fossiles et Minéraux économiques envoyée à l'Exposition de 1867.* Vol. XIII., Pamphlets. Octavo series.
8 vo. 72 pp. Paris, 1867.
- *Note sur Les Sources Acides et les Gypses du Haut Canada.* Vol. VII., Pamphlets. Quarto series.
4to. 4 pp. 1855.
- *On some Points in Chemical Geology.* Vol. XX., Pamphlets. Octavo series.
8vo. 15 pp.

- HUNT, T. Sterry. On the Chemical and Mineralogical Relations of Metamorphic Rocks. Vol. XI., Pamphlets. Octavo series. 8vo. 16 pp. Montreal, 1863.
- On the Chemistry of the Primeval Earth. Vol. XX., Pamphlets. Octavo series. 8vo. 8 pp. 1867.
- On the Theory of Igneous Rocks and Volcanoes. Vol. XX., Pamphlets. Octavo series. 8vo. 8 pp. Montreal, 1858.
- On the Theory of Types in Chemistry. Vol. XXIX., Pamphlets. Octavo series. 8vo. 8 pp. 1863.
- Recherches sur les Eaux Minerales du Canada. Vol. VIII., Pamphlets. Quarto series. 4to. 5 pp. 1841.
- Report on the Gold Region of the County of Hastings. *Geol. Survey of Canada.* Vol. III., Pamphlets. Octavo series. 8vo. 11 pp. Montreal, 1867.
- Report on the Gold Region of Nova Scotia. *Geol. Survey of Canada.* Vol. III., Pamphlets. Octavo series. 8vo. 48 pp. Ottawa, 1868.
- Researches on Gypsums and Magnesian Rocks. Vol. XV., Pamphlets. Octavo series. 8vo. 37 pp.
- Sur les Volumes Atomiques. Vol. III., Pamphlets. Quarto series. 4to. 5 pp. 1855.
- See Michel, A.
- and Douglas, Jas., Jr. A New Process for the Extraction of Copper from its ores, with notes on the treatment of Gold and Silver ores. Vol. VIII., Pamphlets. Octavo series. 8vo. 16 pp. Montreal, 1870.
- HUXLEY, Thomas H., and Etheridge, Robert. A Catalogue of the Collection of Fossils in the Museum of Practical Geology, with an explanatory introduction. 12mo. 381 pp. London, 1860.
- HUYSEN, A. Einrichtung einer hüttenmannischer Lehranstalt in Oberschlesien. 8vo. 31 pp. Breslau, 1863.
- HYNE, J. C. Report on the Coal Beds of the Pacific Coast Petroleum Company. 8vo. 8 pp. New-York, 1865.

I.

- INDUSTRIAL Monthly. } See under Journals.
 INDUSTRIE Blätter. }
- INSTITUTION of Civil Engineers, London. See, under Journals, Transactions of the.
- INSTRUCTION Abrégée sur les Mesures. Deduites de la grandeur de la Terre uniformes pour toute la Republique, et sur les Calculs relatif à leur division décimale. Par la Commission temporaire des Poids et Mesures republicaines. 8vo. 173 pp. Paris, 1794.
- INSTRUCTIONS for Observing the Transit of Venus. Vol. IV., Pamphlets. Quarto series. 4to. 28 pp. Washington, 1874.

- INTERNATIONAL Exhibition, London, 1862. Documents Officiels completants les rapports du Jury International sur l'ensemble de L'Exposition de Londres de 1862. Vols. I., II., III., V. to VII. 6 vols. 8vo. Paris, 1864.
- Report of the Juries on the Subjects in the Thirty-Six Classes into which the Exhibition was divided. Imp. 8vo. London, 1863.
- Tunner, P. Berichte über jene Gegenstände der Londoner Weltindustrie Ausstellung von 1862 die den metallurgischen Progressen Angehören. 8vo. 136 pp. Vienna, 1863.
- IRON. }
 ——— Age. } *See under Journals.*
- IRVING, Poland. The Age of the Quartzites, Schists and Conglomerates of Sauk Co., Wis. Vol. XV., Pamphlets. Octavo series. 8vo. 9 pp., 1 map. 1872.
- ITZENPLITZ, Grafen von. *See under* Exposition Universelle de Paris, en 1867.
- IVES, Lieut. J. C. Report upon the Colorado River of the West. 4to. 364 pp. Washington, 1861.

J.

- JAARBOEK van het Mijnwesen in Nederlandisch Oost-Indie. *See under Journals.*
- JACKSON, C. T. Atlas Illustrating the First Report upon the Geology of the State of Maine. XXIV. plates. 4to. 8vo. 137 pp. Augusta, Me., 1838.
- Second Annual Report on the Geology of the Public Lands belonging to the two States of Maine and Massachusetts. 8vo. 330 pp. Augusta, Me., 1839.
- Third Annual Report on the Geology of the State of Maine. 8vo. 330 pp. Augusta, Me., 1839.
- Final Report on the Geological and Agricultural Survey of the State of Rhode Island, 1839. 8vo. 312 pp. Providence, 1840.
- JAEGER, George. Osteologische Bemerkungen. Vol. VI., Pamphlets. Quarto series. 4to. 44 pp., III. plates. 1855.
- JAHRBUCH der Chemie und Physik. }
 ——— für der Berg und Hüttenmann. } *See under*
 ——— der K. K. Geologischen Reichsanstalt. } *Journals.*
 ——— für Mineralogie, Geologie, &c. }
- JAHRESBERICHTE über die Beobachtungen, Versuche, &c., des Berg. u. Hüttenmännischen Maschinen- und Bauwesens. }
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 ——— über die Fortschritte der Chemie und ver- } *Journals.*
 ——— wandten Theile anderer Wissenschaften. }
 ——— über die Fortschritte der Reinen Chemie. }
 ——— über die Fortschritte der Physik. }
 ——— über die Leistungen der Chemischen Tech- }
 nologie. }

- JAHN, G. A. Katechismus der Astronomie.
16mo. 191 pp. Leipsig, 1869.
- JAMES, Clark H. Spongiæ Ciliatæ, as Infusoria Flagellata. Vol. X.,
Pamphlets, Quarto series. 4to. 38 pp. Cambridge, 1867.
- JAMESON, R. A System of Mineralogy.
2 vols. 8vo. Edinburgh, 1804.
- JANIN, Jules Célestin. Cours de Physique de L'École Poly-
technique. 2 vols. 8vo. Paris, 1863.
- J. Petit Traité de Physique. 8vo. 682 pp. Paris, 1870.
- JAQUET, A. Tracé Général des Courbes.
8vo. 250 pp. Paris, 1858.
- JAVAL et Garnier. Machines à Percer les Roches. 2 vols. 8vo.
- Machines à Percer, Couper, et Abattre les Roches.
8vo. 91 pp.
- JEFFRIES, D. A Treatise on Diamonds and Pearls. Fourth edition.
8vo. 116 pp. London.
- JENZSCH, Gustav. Ueber eine Mikroskopische Flora und Fauna.
Krystallinischer Massengesteine.
8vo. 29 pp. Leipsig, 1868.
- JICINSKY, Wilhelm. Das Mährisch-Schlessische-Steinkohlen-Revier
bei Mährisch-Ostrau.
8vo. 132 pp.; Atlas, V. plates. Vienna, 1865.
- JOCHAMS. Notice sur L'Incendie d'une Couche de Houille.
Vol. III., Pamphlets. Octavo series. 8vo. 42 pp., II. plates. 1852.
- JOHNSON, Pres. Andrew. A Message Concerning the International
Monetary Conference held at Paris in June, 1867.
8vo. 110 pp. Washington, 1867.
- See, also, under Exposition Universelle de Paris, en 1867.
- George W. Muck for the Many; or, the Economy of
House Sewage: Showing that the Sewage of every Household
is Manure Sufficient for the Production of all Its Vegetable
Food. 32mo. 24 pp. London.
- James F. W. Chemical Tables, exhibiting the Present
State of our Knowledge in regard to the Chemical and
Physical Properties of Simple and Compound Bodies. Part I.
Vol. V., Pamphlets. Quarto series. 4to. 24 pp. Edinburgh, 1836.
- Description and Analysis of Hatchetine, found in Urpeth
Colliery, near Newcastle. Vol. IX., Pamphlets. Quarto series.
4to. 7 pp. 1837.
- Elements of Agricultural Chemistry and Geology. Seventh
edition. 12mo. 410 pp. Edinburgh, 1856.
- Instructions for the Analysis of Soils, Limestones and
Manures. Third edition. 12mo. 101 pp. Cleveland, 1856.
- Lectures on the Applications of Chemistry and Geology to
Agriculture. Fifth edition, with Appendix.
8vo. 708 pp. New-York, 1849.
- The Chemistry of Common Life.
2 vols. 12mo. New-York, 1855.
- S. W. How Crops Feed. 12mo. 375 pp. New-York, 1870.
- How Crops Grow. 12mo. 394 pp. New-York, 1868.

- JOHNSON, S. W. Report on Commercial Fertilizers. Vol. XVI., Pamphlets.
Octavo series. 8vo. 19 pp. 1870.
- Report on Peat, Muck and Commercial Manures.
12mo. 174 pp. Hartford, 1858.
- William. The Practical Draughtsman's Book of Industrial Design, and Machinist's and Engineer's Drawing Companion.
4to. 200 pp., LV. plates. Philadelphia, 1871.
- W. R. Notes of the Use of Anthracite in the Manufacture of Iron.
12mo. 155 pp. Boston, 1841.
- JOHNSTRUP, F. Om Hævningsfænomenerne, i Moens Klint.
12mo. 45 pp., I. plate. Copenhagen, 1874.
- Om Kullagene paa Færoerne samt Analyser af de i Danmark og de nordlige Bilande forekommende Kul.
12mo. 44 pp. Copenhagen, 1873.
- Oversigt over de palæozoiske Dannelser paa Bornholm.
12mo. 10 pp. Copenhagen, 1874.
- Sur les Couches Carbonifères des îles Fœroe et les analyses des charbons du Danemark et des possessions danoises dans le Nord.
12mo. 4 pp., I. plate. Copenhagen, 1873.
- JONES, J. Abstract of Experiments upon the Physical Influences exerted by Living, Organic and Inorganic Membranes, upon Chemical Substances passing through them by endosmose.
Vol. XXIX., Pamphlets. Octavo series. 8vo. 8 pp. Philadelphia, 1855.
- William A. Report upon the Reconnaissance of Northwestern Wyoming, including Yellowstone National Park, made in the summer of 1873. With appendix.
8vo. 326 pp., L. maps and charts. Washington, 1875.
- JOURNALS. See, at the end of this alphabet, Catalogue of Journals and Periodical Publications.
- JOUVE, C. J. Compositions de Mathématique et de Physique.
8vo. 295 pp. Paris, 1855.
- Joy, Charles A. Analysis of Meteorite from Chili. Vol. XI., Pamphlets.
Octavo series. 8vo. 6 pp. New-York, 1864.
- Chemistry. *An Inaugural Address*. Vol. XVII., Pamphlets.
Octavo series. 8vo. 25 pp. New-York, 1858.
- Examination of a Few American Minerals. Vol. XI., Pamphlets.
Octavo series. 8vo. 6 pp. New-York, 1865.
- Examination of American Blendes for Thallium and Indium.
Vol. XI., Pamphlets. Octavo series. 8vo. 4 pp. 1866.
- Miscellaneous Chemical Researches. *Inaugural Dissertation*. Vol. XXVII., Pamphlets. Octavo series.
8vo. 49 pp. Gottingen, 1853.
- On Glucinum and Its Compounds. Vol. XXIX., Pamphlets. Octavo series.
8vo. 11 pp. 1863.
- On the Chimenti Pictures. Vol. V., Pamphlets. Octavo series.
8vo. 7 pp.
- JUKES, J. B. Report upon the Geological Survey of Great Britain.
8vo. 241 pp. London, 1859.
- JULIEN, Alexis A. On Metabrushite, Zeugite, Ornithite and other minerals of the Key of Sanbrero. Vol. XII., Pamphlets. Octavo series.
8vo. 13 pp. 1865.

- JULIEN, Alexis A. On Two Varieties of Sponge Spicules. Vol. XXVI.
Pamphlets. Octavo series. 8vo. 7 pp. 1865.
- JULLIEN, C. E. Traité theoretique et pratique de la Construction
des Machines à Vapeur.
2 vols. 4to. text and plates. Paris, 1862.
- P. M. Problèmes de Mécanique Rationelle.
2 vols. 8vo. Paris, 1855.

K.

- KALENDER für den Oberschlesischen Bergmann. } *See under*
KALENDER für Schlesiſchen Berg und Hüttenmann. } *Journals.*
- KARSTEN, E. J. B. Grundriss der Metallurgie und der metallur-
gischen Hüttenkunde. 8vo. 535 pp. Breslau, 1818.
- Handbuch der Eisenhüttenkunde.
5 vols. 8vo., text; Atlas, 2to. Berlin, 1841.
- Lehrbuch der Salinkunde. 2 vols. 8vo. Berlin, 1846.
- System der Metallurgie.
5 vols. 8vo., text; Atlas, LI. plates. Berlin, 1832.
- Herman. Lehrbuch der Krystallographie.
8vo. 169 pp. Leipsig, 1861.
- KEATING, W. H. Account of the Jeffersonite, a New Mineral.
Vol. X., Pamphlets. Octavo series.
- The Art of Mining. 8vo. 12 pp. Philadelphia, 1822.
- The Art of Mining. 8vo. 87 pp. Philadelphia, 1821.
- KEFERSTEIN, Christian. Geognostische Bemerkungen über die
basaltischen Gebilde des westlichen Deutschlands.
8vo. 207 pp. Halle, 1820.
- KEITH, —. *See under* Washington Astronomical and Meteoro-
logical Observations; Appendices to Report for 1871.
- KELLY, P. The Universal Cambist and Commercial Instructor.
Second edition. 2 vols. 4to. London, 1821.
- KENBAUER and Vogel. Analyse des Harnes.
8vo. 294 pp. Weisbaden, 1856.
- KENNEDY, Alfred L. Practical Chemistry, a branch of Medical
Education. Vol. XXVIII., Pamphlets. Octavo series.
8vo. 11 pp. Philadelphia, 1852.
- Jos. C. G. Preliminary Report of the Superintendent of
the Census, on the Eighth Census of the United States, 1860.
8vo. 294 pp. Washington, 1860.
- KENNGOTT, Adolf. Die Minerale der Schweiz.
12mo. 460 pp. London, 1866.
- Mineralogische Notizen. 15 Pamphlets under this title.
1853–1854. Vol. XXXVI., Pamphlets. Octavo series.
- Synonymik der Krystallographie.
8vo. 175 pp. Vienna, 1855.
- Übersicht der Resultate Mineralogischer Forschungen.
6 vols. 4to. Leipsig, 1844–1865.

- KENT, E. N. Description of his Patent Gold Separator and Amalgamator. Vol. I., Pamphlets. Duodecimo series.
12mo. 24 pp. New-York, 1863.
- KERL, Bruno. Abriss der Thonwarrenkunde.
8vo. 232 pp. Brunswick, 1868.
- Anleitung zum Studium der Harzer Hütten-Prozesse insbesondere sowie der Hütten-Prozesse überhaupt.
16mo. 84 pp. Clausthal, 1857.
- Die Oberharzer Hütten-Prozesse.
8vo. 196 pp., 54 pp. Clausthal, 1861.
- Grundriss der Allgemeinen Hüttenkunde.
8vo. 284 pp. Leipsig, 1872.
- Grundriss der Metallhüttenkunde.
8vo. 445 pp. Leipsig, 1873.
- Grundriss der Salinenkunde.
8vo. 232 pp. Brunswick, 1868.
- Handbuch der Metallurgischen Hüttenkunde.
3 vols. 8vo. Freiberg, 1855.
- The same as above. 4 vols. 12mo. Freiberg, 1861–1865.
- Leitfaden bei qualitativen und quantitativen Löthrohr-Untersuchungen.
12mo. 158 pp. Clausthal, 1862.
- Metallurgische Probirkunst. 8vo. 512 pp. Leipsig, 1866.
- *See, also*, Bodeman, Theodor, and Kerl, Bruno; *and* Repertorium der Technischen Literatur.
- KERPELY, Anton. Die Anlage und Einrichtung der Eisenhütten.
First number. 8vo. Leipsig, 1873.
- *See, also, under Journals*, Berichte über die Fortschritte der Eisenhütten Technik; *and under* Wiener Weltausstellung, 1873.
- KERR, W. C. Report of the Progress of the Geological Survey of North Carolina, 1866. Vol. XIII., Pamphlets. Octavo series.
8vo. 56 pp. Raleigh, 1867.
- KEYSERLING, A. G. Geognostische Beobachtungen.
2 vols. 4to. text and plates. St. Petersburg, 1846.
- Wissenschaftliche Beobachtungen auf einer reise in das Petschora Land, im Jahre, 1843. Vol. IV., Pamphlets. Quarto series.
4to. 148 pp. St. Petersburg, 1846.
- KEYSTONE Bridge Company's Illustrated Album, embracing Iron Bridges, Roofs, Columns, Chord Links and Shapes, with Description of Long-Span Bridges, Quality of Materials and Principles of Construction.
4to. 42 pp., II. plates. St. Louis, 1874.
- KIDD, John. Outlines of Mineralogy. 2 vols. 8vo. Oxford, 1809.
- KILBOURN, John. A Compilation of Public Documents concerning the Ohio Canals, which are to connect the Lake Erie with the Ohio River; comprising a complete Official History of these Great Works of Internal Improvement.
8vo. 452 pp. Columbus, 1832.
- KIMBALL, J. P. Flora from the Apalachian Coal Field. *Inaugural Dissertation.* Vol. XXII., Pamphlets. Octavo series.
8vo. 28 pp., III. plates. Gottingen, 1857.

- KIMBALL, J. P. Notes on the Iron Ores of Marquette, Michigan.
Vol. XXV., Pamphlets. Octavo series. 8vo. 15 pp. 1864.
- The same as above. 8vo. 15 pp. 1865.
- On Sodalite and Elæolite. Vol. XI., Pamphlets. Octavo series.
8vo. 4 pp. 1870.
- On the Silver Mines of Santa Eulalia, State of Chihuahua,
Mexico. Vol. XIV., Pamphlets. Octavo series. 8vo. 15 pp. 1870.
- Our Mineral Interest. Vol. XXV., Pamphlets. Octavo series. *Am.*
Bureau of Mines Publications. 8vo. 42 pp.
- Report on the Coal of the Broad Top Steam Coal Company
of Pennsylvania. Vol. XXXII., Pamphlets. Octavo series.
8vo. 8pp. New-York, 1867.
- Report on the Extension of the Vermont Copper Company's
Copper Ore, (Gifford Tract,) Vershire, Orange Co., Vermont.
Vol. XXXII., Pamphlets. Octavo series.
8vo. 7 pp., I. map. New-York, 1869.
- Report upon the Estate of the New-Jersey Coal Company
of Wilkesbarre, Pa. Vol. XXXII., Pamphlets. Octavo series.
8vo. 15 pp. New-York, 1865.
- KIND, E. G. Anleitung zum Abteufen der Bohrlöcher.
8vo. 188 pp. Luxemburg, 1842.
- KING, C. W. The Handbook of Engraved Gems.
8vo. 396 pp. London, 1866.
- The Natural History of Precious Stones and Gems, and of
the Precious Metals. 8vo. 442 pp. London, 1865.
- The Natural History of the Precious Stones, and of the
Precious Metals. 12mo. 364 pp. London, 1870.
- KINGAND, Hague. Report on Mining Industrie.
4to. 647 pp., text; Atlas, XIV. plates.
- KIRCHOFF, G. Untersuchungen über das Sonnenspectrum und die
Spectren der Chemischen Elemente. Parts first and second.
43, 16 pp. Berlin, 1863, 1866.
- KIRKWOOD, J. P. Report Descriptive of the Construction of the
Brooklyn Water Works and Sewers.
4to. 160 pp. New-York, 1867.
- KIRPALDY, David. Results of an Experimental Inquiry into the
Tensile Strength and other Properties of various kinds of
Wrought Iron and Steel. 8vo. 227 pp. London, 1866.
- KIRSTEN, G. Katechismus der Bienenkunde und Bienenzucht.
16mo. 156 pp. Leipsig, 1852.
- KIRWAN, Richard. Elements of Mineralogy. Vol. I. Earths and
Stones. Vol. II. Salts. Inflammables and Metallic Sub-
stances. 2 vols. 8vo. London, 1794, 1796.
- KITCHELL, William. Second Annual Report on the Geological
Survey of the State of New-Jersey for 1855.
8vo. 248 pp. Trenton, 1856.
- KLAPROTH, Martin H. Analytical Essays towards Promoting the
Knowledge of Mineral Substances.
2 vols. 12mo. London, 1801.
- KLEMMANN, L. Die Zinkgewinnung in Obeschlesien.
12mo. 43 pp. Breslau, 1860.

- KLENCKE, Hermann. Die Nahrungsmittelfrage in Deutschland.
12mo. 173 pp. Leipsig, 1855.
- Die Verfälschung der Nahrungsmittel und Getränke der
Kolonialwarren. Drogen und Manufacte der gewerblichen
und landwirtschaftlichen Producte. Nach Arthur Hill,
Hassall und A. Chevalier. 12mo. 1099 pp. Leipsig, 1858.
- KLETZINSKY, Vicenz. Compendium der Biochemie.
8vo. 84 pp. Vienna, 1858.
- KLIPSTEIN, Auguste von. Gemeinützige Blätter zur Beförderung des
Bergbaues und Hüttenbetriebes.
4to. Heft I. 110 pp. Frankfort, 1849.
Heft II. 124 pp., I. plate. Giessen, 1859.
- KLUGE, K. E. Handbuch der Edelsteinkunde für Mineralogen,
Steinschneider und Juweliere. 8vo. 561 pp. Leipsig, 1860.
- KNAPP, F. Chemical Technology. Edited by E. Ronalds and T.
Richardson. First American edition, with notes and addi-
tions by W. R. Johnson.
2 vols. 8vo. Philadelphia, 1848, 1849.
- See Ronalds, Richardson and Watts.
- KNIGHT, J., and Latrobe, B. H. Report upon the Locomotive En-
gines, and the Police and Management of several of the
Principal Rail-Roads in the Northern and Middle States.
8vo. 24 pp. Baltimore, 1836.
- KNOP, W. Handbuch der Chemischen Methoden.
8vo. 506 pp. Leipsig, 1859.
- KOBELL, Franz von. Grundzüge der Mineralogie.
8vo. 348 pp. Nuremburg, 1838.
- Tafeln zur Bestimmung der Mineralien.
8vo. 110 pp. Munich, 1869.
- The same as above. 8vo. 108 pp. Munich, 1873.
- KOCH, C. L., and Dunker, W. Beiträge zur Kenntniss der nord-
deutschen Oolithgebirges und dessen Versteinerung.
4to. 64 pp. Brunswick, 1837.
- Friedrich. Beiträge zur Kenntniss Krystallinischer Hütten-
producte. 12mo. 88 pp. Gottingen, 1822.
- KODITEK, J. See Wathner.
- KOHL, J. G. Der Verkehr und die Ansiedelungen der Menschen.
8vo. 602 pp. Leipsig, 1850.
- KOHN, Ferdinand. Iron and Steel Manufacture.
4to. 270 pp., LXII. plates. London, 1869.
- KOKSCHAROW, N. v. Materialien zur Mineralogie Russlands.
4 vols. 8vo. text; Atlas, LVIII. plates. St. Petersburg,
1853–1861.
- Vorlesungen über Mineralogie. Erster Band.
4to. 344 pp. St. Petersburg, 1865.
- KOLBE, Hermann. Ausführliches Lehrbuch der Organischen Chemie.
2 vols. 8vo. Brunswick, 1854, 1860.
- The same as above. Vol. III, part 2. Edited by H. von
Fehling. 8vo. 160 pp. Brunswick, 1868.
- Das Chemische Laboratorium der Universität Leip und die
Seit 1866 darin ausgeführten Chemischen Untersuchungen.
8vo. 667 pp. Brunswick, 1872.

- KOLBE, Hermann. Ueber die Chemische Constitution der Organischen Kohlenwasserstoffe. Vol. XXI., Pamphlets. Octavo series. 8vo. 40 pp. Brunswick, 1869.
- KONINCK, L. De. Mémoire sur les Crustacés Fossiles de Belgique. Vol. VI., Pamphlets. Quarto series. 4to. 20 pp., I. plate. 1861.
- Monographie des Productus. (Plates.) 4to. XVII. plates. Liege, 1847.
- Notice sur Deux Espèces de Brachiopodes. Vol. XX., Pamphlets. Octavo series. 8vo. 10 pp., I. plate.
- KOPP, Hermann. Einleitung in die Krystallographie. 8vo. 346 pp. text; Atlas, XXI. plates. Brunswick, 1869.
- Sechs Tafeln mit Netzen zu Krystallmodellen zu der Einleitung in die Krystallographie. Third edition. 4to. VI. plates. Brunswick, 1869.
- KOSTLEIN, U. Die Metalwaaren Industrie. 2 vols. 12mo. Weimar, 1863.
- KRAFT, J. Roue Hydraulic à Aubes Courbés. 4to. 47 pp., III. plates. Paris, 1859.
- KRAUT, Karl. *See* Gmelin-Kraut.
- KRENNER, J. A. Krystallographische Studien über den Antimonit. Vol. IX., Pamphlets. Octavo series. 8vo. 46 pp., XI. plates. 1864.
- KREPP, F. C. The Sewage Question. 8vo. 208 pp. London, 1867.
- KROK, J. M. Nagra Koboltiaksalter. Vol. III., Pamphlets. Quarto series. 4to. 26 pp. 1870.
- KROM, S. R. Description of Krom's System and Machinery for Crushing Ores. 8vo. 75 pp. New-York, 1872.
- KROMAYER, Augusta. Die Bitterstoffe und Krazendschmeckenden Substanzen des Pflanzenreichs. 8vo. 146 pp. Erlangen, 1861.
- KRUPP, Friederich. A Descriptive pamphlet of the Cast Steel Works of Friederich Krupp, Essen, Germany. Vol. VIII., Pamphlets. Octavo series. 8vo. 24 pp. Essen, 1873.
- KUPELWEISER, F. *See under* Wiener Weltausstellung, 1873.
- KURR, J. G. v. Das Mineralreich in Bildern. 4to. XXII. plates. Stuttgart, 1858.
- KURZER Abriss der Geographischen, Geognostischen und Bergbaubetriebes der Siebenbürgischen Salinen. 16mo. 18 pp. Klausenberg, 1873.
- KÜSTEL, Guido. A Treatise on the Concentration of all Kinds of Ores; Including the Chlorination Process. 8vo. 259 pp., VII. plates. San Francisco, 1868.
- Nevada and California processes of Silver and Gold extraction. 8vo. 327 pp. San Francisco, 1863.

L.

LABORATORY (The.) *See under Journals.*

LACROIX, Eugene: Bibliographie des Ingénieurs, des Architectes des Chefs D'Usines Industrielles des Élèves des Écoles Polytechniques et Professionnelles et des Agriculteurs.

3 vols. 4to. Paris, 1857-1865.

——— *See Exposition Universelle de Paris, en 1867.*

LAGRANGE, E. J. Manuel d'un Cours de Chimie.

3 vols. 12mo. Paris, 1812.

——— J. B. B. A Manual of a Course of Chemistry.

2 vols. 8vo. London, 1800.

LALANNE, Leon. Sur les terrains d'une partie de la vallée du Donetz. Vol. XIV., Pamphlets. Octavo series.

8vo. 17 pp., I. plate. 1839.

LAMBORN, Robert H. A Rudimentary Treatise on the Metallurgy of Copper.

12mo. 232 pp. London, 1860.

LAMÉ, G. Lehrbuch der Physik für höhere polytechnische Lehranstalten.

3 vols. 8vo. Darmstadt, 1838-1841.

LAMPADIUS, W. A. Grundriss einer allgemeinen Hüttenkunde.

8vo. 531 pp. Gottingen, 1827.

——— Die neuen Fortschritte im Gebiete der Gesammten Hüttenkunde in Nachträgen zur Grundriss einer allgemeinen Hüttenkunde.

8vo. 290 pp. Freiberg, 1839.

——— Handbuch der allgemeinen Hüttenkunde.

2 vols. 8vo. Gottingen, 1817.

——— Neue Erfahrungen in Gebeite der Chemie und Hüttenkunde.

8vo. 188 pp., IV. plates. Weimar, 1817.

LAN. *See Gruner and Lan.*

LAND Office Reports. *See under Journals.*

LANDGREBE, G. Mineralogie der Vulcane.

8vo. 396 pp. Leipzig, 1870.

——— Naturgeschichte der Vulcane und der damit in Verbindung stehenden Erscheinungen.

8vo. 2 vols. in 1. Gotha, 1855.

——— Über die Pseudomorphism im Mineralreich.

8vo. 343 pp. Cassel, 1831.

LANDRIN, H. C., Jr. A Treatise on Steel. Translated from the French by A. A. Fesquet.

12mo. 352 pp. Philadelphia, 1868.

——— Traité de la Fonte et du Fer.

8vo. 304 pp. Paris, 1864.

LANG, Viktor von. Lehrbuch der Krystallographie.

12mo. 358 pp., VII. plates. Vienna, 1866.

——— Versuch einer Monographie des Bleivitriols. vol. XXVIII., Pamphlets. Octavo series.

8vo. 54 pp., XXVIII. plates. Vienna, 1859.

LANKESTER, E. Good Food.

16mo. 64 pp. London, 1867.

LARDNER, D. Handbook of Natural Philosophy and Astronomy.

12mo. 451 pp. Philadelphia, 1857.

- LARIVIERE, A. E. Description Geognostique du Grand Duché de Luxembourg. 4to. 157 pp. Brussels, 1828.
- LAUR, J. A. Vereinfachte und vervollkommene practische Geodäsie. 2 vols. 8vo. Leipsig, 1857.
- M. P. De la Production des Métaux Précieux en Californie. 8vo. 132 pp. Paris, 1862.
- LAURE, G. C. Die Echinoiden der Oesterreichisch-Ungarischen Oberen Tertiärablagerungen. 4to. 75 pp. Vienna, 1871.
- LAURENT, Auguste. Précis de Cristallographie. 12mo. 104 pp. Paris, 1847.
- Methode de Chimie. 8vo. 464 pp. Paris, 1854.
- LAVOISIER, Antoine Laurent. Elements of Chemistry in a New Systematic Order, &c. Translated from the French by Robert Karr. 2 vols. in 1. 8vo. New-York, 1806.
- Traité Élémentaire de Chimie. Second edition. 2 vols. in 1. 8vo. Paris, 1793.
- LAW, Henry. The Elements of Euclid, with many additional propositions and explanatory notes; to which is prefixed an Introductory Essay on Logic. 12mo. 348 pp. London, 1870.
- A Treatise on Logarithms and Trigonometrical and other Mathematical Tables. 16mo. 327 pp. London, 1867.
- LAW Relating to the Regulation of Mines in Nova Scotia. Vol. III., Pamphlets. Octavo series. 8vo. 27 pp. Halifax, 1873.
- LEA, Carpenter, Stimpson, Binney and Prime. Check Lists of the Shells of North America. *Smith. Misc. Coll.* 8vo. Washington, 1860.
- LEAVITT, T. H. Facts About Peat, as an Article of Fuel. 8vo. 168 pp. Boston, 1866.
- LE BEUF. L'Amélioration des Liquides. 24mo. 261 pp. Paris, 1862.
- LE BLANC. Nouveau Système complet de Filature de Coton usité en Angleterre. 4to. 156 pp. Paris, 1828.
- LECOUTE, John L. Classification of the Coleoptera of North America. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Parts 1 and 2. 8vo. 348 pp. Washington, 1861-1873.
- New Species of North America Coleoptera. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Parts 1 and 2. 8vo. 240 pp. Washington, 1863-1873.
- LEDEBUR, A. Das Roheisen in bezug auf seine Verwendung zur Eisengiesserei. Vol. VIII., Pamphlets. Octavo series. 8vo. 81 pp., II. plates. Leipsig, 1872.
- LEE, Thomas, J. Tables and Formulæ useful in Surveying, Geodesy and Practical Astronomy, including Elements for the Projection of Maps, and Instruction for Field Magnetic Surveying. Third edition. *Prof. Pap. Corp. of Eng. U. S. A., No. 12.* 8vo. 310 pp. Washington, 1873.
- LEEDS, Albert R. See Wurtz, Henry, and Leeds, Albert.
- LEGENDRE, Adrien Marie. Éléments de Géométrie, avec additions et modifications par A. Blanchet. 8vo. 280 pp. Paris, 1859.
- LE GENIE Industrielle. See under Journals.

- LEHMANN, C. G. *Physiological Chemistry*. Translated by George E. Day, and Edited by R. E. Rogers.
2 vols. 8vo. Philadelphia, 1855.
- LE HON, H. *L'Homme Fossile en Europe. Son Industrie, ses Moeurs, et ses Œuvres D'Art*. 8vo. 360 pp. Brussels, 1867.
- LEHRFELDT, L. *Bijouterie fabrikant und Goldarbeiter*.
8vo. 56 pp. Pforzheim, 1862.
- LEIDY, Joseph. *See under* United States Geological Survey of the Territories. Quarto series.
- LEJUSTE, L. *Guide des Architectes, Verificateurs, Entrepreneurs et de Toutes les Personnes qui font Bâtir, ou Traité Complet de L'Evaluation des Ouvrages de Construction*.
4to. 439 pp. Paris, 1848.
- LE NATURALISTE Canadien. *See under Journals*.
- LENG, Heinrich. *Vollständiges Handbuch der Glasfabrication nach allen ihren Haupt, und Uebenzweigen bearbeitet von Dr. T. H. Schmidt*.
12mo. 740 pp. Weimar, 1854.
- LENOIR. *Gas Engine*. 8vo. 19 pp. 1866.
- LEO, E. I. *Die Aussuchung, Gewinnung und Förderung der Braunkohlen*. 8vo. 176 pp., XII. plates. Quedlinburg, 1854.
- *Theoretische-practische Anleitung zum Tunnelbau*.
8vo. 113 pp. Leipsig, 1853.
- *W. Der Grubenhaushalt*. 8vo. 220 pp. Quedlinburg, 1859.
- *Die Brennmaterialien-Lehre*.
8vo. 296 pp. Quedlinburg, 1860.
- *Die gesammten Torfwesen*.
12mo. 144 pp. Quedlinburg, 1860.
- *Lehrbuch der Bergbaukunde*.
8vo. 525 pp. Quedlinburg, 1861.
- *Theoretische-practische Anleitung zum Nivelliren*.
4to. 136 pp. Weimar, 1846.
- LEONHARD, Gustav von. *Katechismus der Mineralogie*.
12mo. 110 pp. Leipsig, 1862.
- *Grundzüge der Mineralogie*.
8vo. 404 pp. Heidelberg, 1860.
- *Karl Cäsar von. Charakteristik der Felsarten*.
8vo. 772 pp. Heidelberg, 1823.
- *Geologie oder Naturgeschichte der Erde*.
5 vols. text; 1 vol. plates. 8vo. Stuttgart, 1836–1844.
- *Hütten-Erzeugnisse*. 8vo. 399 pp. Stuttgart, 1858.
- *Lehrbuch der Geognosie und Geologie*.
8vo. 869 pp. Stuttgart, 1835.
- *Vulkanen Atlas zur Natugeschichte der Erde*. XV. plates. *Geologischer Atlas zur Naturgeschichte der Erde*. 33 pp., XI. plates. 4to. Stuttgart, 1841.
- LEPAINTEUR, C. *See Exposition Universelle de Paris, en 1867*.
- LE PLAY, F. *Beschreibung der Hütten-Prozesse*. Edited by Carl Hartmann. 8vo. 260 pp. Quedlinburg, 1851.
- *Grundsätze der Eisenhüttenwerken und Holtz Betriebe*. Translated by Carl Hartmann.
8vo. 247 pp. Freiberg, 1858.

- LE ROY, Alphonse. L'Université de Liège depuis sa Fondation.
8vo. 1179 pp. Liège, 1869.
- LEROY, C. F. A. Géométrie Descriptive.
2 vols. 4to. text and plates. Paris, 1855.
- Traité de Stéréotomy.
2 vols. 4to. text and plates. Paris, 1844.
- LESCHNER, C. F. Tafeln zu Aufsuchung der Seigerteufen und
Sohlen der Flachenschnüre bei dem Markscheiden.
4to. 30 pp. Freiberg, 1842.
- LES HOUILLIÈRES. } *See under Journals.*
LES MONDES. }
- LESLEY, J. P. A Manual of Coal and its Topography.
8vo. 224 pp. Philadelphia, 1856.
- The Iron Manufacturer's Guide to the Furnaces, Forges and
Rolling Mills of the United States.
8vo. 772 pp. New-York, 1859.
- LES MINES D'Or de la Nouvelle Ecosse, 1862-1866.
8vo. 8 pp. Halifax, 1867.
- LESOINNE, A. Vorträge über allgemeine Hüttenkunde. Vol. I.
Part 1. Die Mechanische aufbereitung der Erze, &c.
8vo. 185 pp. Leipsig, 1860.
- LESQUEREUX, Leo. *See Hitchcock, Edward.*
- LE TECHNOLOGISTE. *See under Journals.*
- LETHEBY, H. Lectures on Food. 8vo. 277 pp. London, 1870.
- LETTSON, W. G. *See Gregg, R. P., and Lettson, W. G.*
- LEUCHS, Erhard F. Das Gebläze mit heitzer Luft.
12mo. 100 pp. Nuremburg, 1834.
- LEUCKART, F. S. Allgemeine Einleitung zur Naturgeschichte der
drei Reiche. 12mo. 130 pp. Stuttgart, 1832.
- LIEBENOW, W. Eisenbahnkarte von Deutschland, Nordliche Hälfte
und Südliche Hälfte. 2 large Charts. Berlin.
- LIEBENTRAU, L. Grundliche Anweisung zur Bearbeitung des
Kupfers, Zinks und Bleies. 12mo. 43 pp. Quedlinburg, 1841.
- LIEBER, O. M. Geological Survey of South Carolina. First and
Second Annual Reports for 1856 and 1857.
8vo. 133, 45 pp., XIII. plates. Charleston, S. C., 1858.
- LIEBIG, Justus von. Animal Chemistry. Edited by G. W.
Gregory. 12mo. 356 pp. New-York, 1842.
- Anleitung zur Analyse Organischen Körper.
8vo. 130 pp. Brunswick, 1853.
- Chemische Briefe. 8vo. 668 pp. Heidelberg, 1851.
- Chimie Organique appliquée à la Physiologie Végétale et à
L'Agriculture, suivie d'un Essai de Toxicologie par C.
Gerhardt. 8vo. 392 pp. Paris, 1841.
- Die Chemie in ihren anwendung auf Agricultur und Physi-
ologie. 8vo. 468 pp. Brunswick, 1846.
- Die Chemie in ihrer Anwendung auf Agricultur und
Physiologie. Vol. I. Der Chemischen Process der Ernährung
der Vegetabilien. Vol. II. Die Naturgesetze des Feldbaues.
2 vols. 8vo. Brunswick, 1862.

- LIEBIG, Justus von. *Traité de Chemie Organique*. Publiée par C. Gerhardt. 3 vols. 8vo. Paris, 1841-1844.
- *Ueber Gährung uber Quelle der Muskelkraft*. 8vo. 138 pp. Leipsig, 1870.
- Poggendorff, J. C., and Wöhler, J. S. L. *Handwörterbuch der Reinen und Angewandten Chemie*. 9 vols. 8vo. Brunswick, 1857-1864.
- LINDAUER, G. *Compendium der Hütten-Chemie*. 8vo. 488 pp. Prag, 1861.
- LINNÆUS, Carl von. *Systema Vegetabilium*. Edited by Curtis Sprengel. Sixteenth edition. 5 vols. 8vo. Gottingen, 1825-1868.
- LITTLE, George. *Report of Progress of the Mineralogical, Geological and Physical Survey of the State of Georgia, for the period from September 1st to December 31st, 1874*. 8vo. 36 pp. Milledgeville, 1875.
- LOEW, H. *Monographs of the Diptera of North America*. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Parts 2 and 3. 8vo. 360 pp., XIII. plates. Washington, 1864-1873.
- LOGAN, W. E. *Notes on Fossils recently obtained from the Laurentian Rocks of Canada, and on Objections to the Organic Nature of Eozoon; with notes by W. B. Carpenter*. Vol. XXII., Pamphlets. Octavo series. 8vo. 9 pp., II. plates. 1867.
- *On New Specimens of Eozoon*. Vol. II., Pamphlets. Duodecimo series. 12mo. 5 pp. 1867.
- *The same as above*. Vol. II., Pamphlets. Duodecimo series. 12mo. 12 pp., II. plates. 1867.
- *and others. On the History of Eozoon Canadense*. Vol. XX., Pamphlets. Octavo series. February, 1865. 8vo. 39 pp.
- *See Geological Survey of Canada*.
- LONDON and Edinburgh Philosophical Magazine and Journal of Science. *See under Journals*.
- Dublin and Edinburgh Philosophical Magazine and Journal of Science. *See under Journals*.
- *Exhibitions, 1851, 1862*. *See Exhibition of the Works of Industry of all Nations*. London, 1851. Also, *International Exhibition*, London, 1862.
- LOOMIS, Elias. *The Aurora Borealis, or Polar Lights; its phenomena and laws*. Vol. VI., Pamphlets. Octavo series. 8vo. 41 pp.
- and Newton, H. A. *On the Mean Temperature, and on the Fluctuations of Temperature, at New-Haven, Conn., Lat. 41° 18' N. Long., 75° 55' W. of Greenwich*. Vol. VI. Pamphlets. Octavo series. 8vo. 54 pp., III. plates.
- LORENZ, Wilhelm. *Stammbaum zu dem Prozessen auf den Freiburger Hütten*. A Chart. Freiberg.
- LOTH, J. *Lehrbuch der Chemie und Mineralogie*. 12mo. 388 pp. Leipsig, 1872.
- LOTTNER, F. H. *Geognostische Skizze des Westfählischen Steinkohlen Gebirges*. 8vo. 162 pp. Iserlohn, 1868.

- LOTTNER, F. H. Leitfaden zur Bergbaukunde. Edited by A. Serlo.
2 vols. 8vo. Berlin, 1869.
- Ergänzensband zum Leitfaden der Bergbaukunde.
8vo. Berlin, 1872.
- H. Leitfaden zur Bergbaukunde. Edited by Dr. A. Serlo.
8vo. 444 pp. Berlin, 1873.
- LOW. On the Chemical Equivalents of Certain Bodies, and on the
Relations between Oxygen and Azote. Vol. XXIX., Pamphlets.
Octavo series. 8vo. 20 pp. 1854.
- LUBBOCK, John. The Origin of Civilization, and the Primitive
Condition of Man. 12mo. 380 pp. New-York, 1874.
- LÜBSEN, H. B. Ausführliches Lerhbuch der Analysis.
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- Ausführliches Lerhbuch der Höhre Geometrie.
8vo. 214 pp. Leipsig, 1855.
- Ausführliches Lerhbuch der Arithmetik und Algebra.
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- Einleitung in die Infinitesimal Rechnung.
8vo. 183 pp. Hamburg, 1855.
- LUCAS, Newton Ivory. Deutsch-Englisches Wörterbuch mit
besonderer Rucksicht auf den gegenwärtigen Standpunkt
der Literatur und Wissensehaft.
2 vols. 8vo. Bremen, 1868.
- English-Deutsches Wörterbuch mit besonderer Rucksicht auf
den gegenwärtigen Standpunkt der Literatur und Wissen-
schaft. 2 vols., 8vo. Bremen, 1854-1856.
- LUDWIG, Rudolph A. B. S. Ueber das rheinische Schiefergebirge.
Vol. II., Pamphlets. Octavo series. 12mo. 40 pp., I. map. 1853.
- LUNDGREN, B. Palæontologiska Iakttagelser öfver Faxekalken pa
Limphamm. Vol. VI., Pamphlets. Quarto series.
4to. 31 pp., I. plate.
- LUNGE, George. Die Destillation des Steinkohlentheers und der
Verarbeitung der damit zusammenhängenden Nebenpro-
ducte. 8vo. 197 pp. Brunswick, 1867.
- LYELL, Sir Charles. Elements of Geology.
2 vols. 12mo. Boston, 1841.
- Principles of Geology. 3 vols. 12mo. Boston, 1842.
- The same as above. 8vo. 834 pp. New-York, 1865.
- The same as above. Vol. I.
8vo. 671 pp. New-York, 1872.
- The Geological Evidences of the Antiquity of Man, with an
Outline of Glacial and Post-Tertiary Geology, and Remarks
on the Origin of Species. Fourth edition.
8vo. 573 pp. London, 1873.
- LYMAN, B. S. A Report on the Bourinot Coal Claims and Land,
Cape Breton. 8vo. 17 pp. New-York, 1865.
- Scientific Education in its Relations to Industry. An Ad-
dress delivered at the Sheffield Scientific School of Yale Col-
lege. Vol. XIX., Pamphlets. Octavo series.
8vo. 30 pp. New-Haven, 1867.
- The Topography of the Punjaub Oil Regions. 4to. 14 pp.

M.

MACADAM, Stevenson. Practical Chemistry.

8vo. 147 pp. London and Edinburgh, 1866.

—— The Chemistry of Common Things.

8vo. 184 pp. London, 1867.

MACEDO, Joaquim Manoel de. Notions de Chorographie du Brézil.

Traduction de J. F. Holbout. 8vo. 504 pp. Leipsig, 1874.

MACFARLANE, Robert. *See* Dyeing and Calico Printing.

MACLEAN, G. M. Elements of Somatology, a Treatise on the General Properties of Matter. 12mo. 120 pp. New-York, 1859.

MACQUER, Pierre Joseph. A Dictionary of Chemistry.

3.vols. 8vo. London, 1777.

MAGAZIN für Oryktognosie. } *See under Journals.*

MAGAZIN für Pharmacie. }

MAHAN, D. H. An Elementary Course of Civil Engineering.

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—— A Treatise on Civil Engineering. Revised and Edited, with additions and new plates, by De Volson Wood.

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MAHLER, Julius. Die moderne Sprengtechnik dargestellt durch Bohrmaschinen, Luftkompressoren, Dynamit und verschiedenen Zündungen für die Gesteingewinnung im Steinbruche, dem Berg- und Eisenbahnbane, &c. 8vo. Vienna, 1873.

MAISON, L. *See* Ansiaux, L.

MAKINS, George H. A Manual of Metallurgy.

8vo. 442 pp. Philadelphia, 1865.

—— A Manual of Metallurgy. Second edition.

8vo. 592 pp. 1873.

MALLET, J. W. On Osmious Acid, and the position of Osmium in the list of Elements. Vol. XXIX., Pamphlets. Octavo series.

8vo. 14 pp. 1860.

—— On Nitride of Zirconium. Vol. XXIX., Pamphlets. Octavo series.

8vo. 9 pp. 1859.

MANN, W. W. A New System of Weights, Measures and Money, entitled the Linn-Base Decimal System; and designed for the Adoption of all Nations as the One Common System. Vol. I., Pamphlets. Duodecimo series.

12mo. 22 pp. New-York, 1871.

MANUFACTURER and Builder. *See under Journals.*

MANUFACTURES of the United States in 1860. Compiled from the original returns of the Eighth Census, under the direction of the Secretary of the Interior.

4to. 745 pp. Washington, 1865.

MAP of Yeddo, Capital of Japan.

- MARCET, W. On the Immediate Principles of the Human Excrements in the Healthy State. Vol. VIII., Pamphlets. Quarto series. 4to. 11 pp., I. plate. 1857.
- MARCOU, Jules. Geological Map of the United States and the British Provinces, N. A. 8vo. 92 pp., VIII. plates. Boston, 1853.
- MARCY, R. B. Explorations of the Red River of Louisiana, in the year 1852. 8vo. 320 pp., with II. maps. Washington, 1853.
- MARLETTE, S. H. Report of the Surveyor-General of the State of Nevada for the years 1865 and 1866. 2 vols. 8vo. 83, 95 pp. Carson City, 1866-1867.
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- MARSH, O. C. Ancient Sepulchral Mound near Newark, Ohio. 8vo. 11 pp.
- Catalogue of Mineral Localities in New-Brunswick, Nova Scotia and Newfoundland. Vol. XII., Pamphlets. Octavo series. 8vo. 8 pp. 1863.
- Catalogue of Official Reports upon Geological Surveys of the United States and British Provinces. Vol. XXII., Pamphlets. Octavo series. 8vo. 14 pp. 1867.
- Contributions to the Mineralogy of Nova Scotia. Vol. X., Pamphlets. Octavo series. 8vo. 5 pp. 1867.
- Notice of a Genus of Fossil Sponges from the Lower Silurian. Vol. XXVI., Pamphlets. Octavo series. 8vo. 1 p. 1867.
- Notice of some Fossil Birds from the Cretaceous and Tertiary Formations of the United States. Vol. XXII., Pamphlets. Octavo series. 8vo. 16 pp. 1870.
- Description of the Remains of a new Enaliosaurian, (*Eosaurus Acadianus*), from the Coal Formation of Nova Scotia. Vol. XXXIII., Pamphlets. Octavo series. 8vo. 16 pp., II. plates. London, 1862.
- The Gold of Nova Scotia. Vol. XIV., Pamphlets. Octavo series. 8vo. 7 pp. New-Haven, 1861.
- MARTENS, J. H. Beschreibung der Hemmungen der höheren Uhrmacherkunst. 2 vols. 8vo. text; Atlas, XXIV. plates. Leipzig, 1858.
- MARVIN, D., Jr. Lavoisier. An Essay read before the Chemical Society of Columbia College, April 8, 1863. Vol. XXVII., Pamphlets. Octavo series. 8vo. 16 pp. Brooklyn, 1863.
- MARX, E. M. Geschichte der Crystallkunde. 8vo. 313 pp. Carlsruhe, 1825.
- MASKELYNE Nevil Story. See Story Maskelyne Nevil.
- MASON, E. D. Report of a Preliminary Survey of the Missouri River in the vicinity of St. Joseph. First Annual Report of the Chief Engineer of the St. Joseph Bridge. On the Physical Characteristics of the Missouri River and the Means used for Directing and Controlling its Channel at St. Joseph, Mo. 3 Pamphlets. 10, 12 and 25 pp. St. Joseph, 1872.

- MASSACHUSETTS Institute of Technology, &c. An Account of the Preliminary Proceedings. Vol. XIX., Pamphlets. Octavo series. 8vo. 23 pp. Boston, 1861.
- Agricultural Societies. *See, under Journals*, Abstracts of the Returns of the.
- Institute of Technology. Outline of Studies in the Department of Practical Geology, Mining and Metallurgy of the School of Industrial Science. Vol. XVIII., Pamphlets. Octavo series. 8vo. 10 pp. Boston, 1864.
- Scope and Plan of the School of Industrial Science of, as reported by the Committee of Instruction of the Institute and adopted by the Government. Vol. XVIII., Pamphlets. Octavo series. 8vo. 28 pp. Boston, 1864.
- MATHER, W. W. Notes on Surface Geology. Vol. VII., Pamphlets. Quarto series. 4to. 47 pp. West Point, N. Y., 1835.
- Second Annual Report of the State Geological Survey of Ohio. 12mo. 386 pp. Columbus, 1838.
- *See, also*, Natural History of the State of New-York. Part IV., Vol. 1.
- MATTHAEY, C. Der Ofenbaumeister. 12mo. 234 pp. Weimar, 1847.
- MATZDORFF, J. Martius. Die Elemente der Krystallographie mit Stereoscopischer Darstellung der Krystallformen. 8vo. 105 pp. Brunswick, 1870.
- Katechismus der Galvanoplastik. 12mo. 104 pp. Leipsig, 1868.
- MAURER, E. Die Formen der Walz Kunst und das Faconeisen. 8vo. 286 pp. text; Atlas, LXVIII. plates. Stuttgart, 1865.
- Roh-und Zwischen Producte. 8vo. 22 pp. Stuttgart, 1868.
- MAWE, JOHN. A Descriptive Catalogue of Minerals. 8vo. 94 pp. London, 1816.
- A Treatise on Diamonds and Precious Stones. 8vo. 166 pp., III. plates. London, 1815.
- Travels in the Interior of Brazil; with a Particular Account of the Gold and Diamond Districts. 8vo. 493 pp. London, 1821.
- MAXIMILIAN, *Prince*. Reise nach Brazilien in der Jahren 1815 bis 1817. 2 vols. 4to. Frankfort, 1820, 1821.
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- MAYER, Karl. *Zur Anatomie des Rhinoceros Indicus*. Vol. VI., Pamphlets. Quarto series. 4to. 14 pp., IV. plates. 1852.
- MAYNARD, G. W. *The Iron Ores of Lake Champlain, United States of America*. Vol. XXIV., Pamphlets. Octavo series. 8vo. 28 pp., with a Map. Newcastle-upon-Tyne, 1874.
- MCCLELLAN, George B., *and others*. *Report of the Board of Engineers on the Subject of Rapid Transit through New-York*. Vol. XXX., Pamphlets. Octavo series. 8vo. 5 pp., II. Plans. New-York, 1870.
- MCCULLOCH, H. *Letters of the Secretary of the Treasury, enclosing Report of James W. Taylor, Special Commissioner for the Collection of Statistics upon Gold and Silver Mining east of the Rocky Mountains*. Vol. III., Pamphlets. Octavo series. 8vo. 28 pp. Washington, 1867.
- M'CULLOCH, J. R. *A Universal Gazetteer*. 4 vols. 4to. New-York, 1843.
- MÉCHAIN, P. F. A., and Delambre, J. B. J. *Base du Système Métrique Décimal ou Mesure de L'Arc du Meridien compris entre les parallèles de Dunkerque et Barcelone, exécutée en 1792 et années suivantes*. 3 vols. 4to. Paris, 1806, 1807-1810.
- MEDICAL and Surgical History of the British Army which served in Turkey and the Crimea. 2 vols. Folio. London, 1858.
- MEEKS, F. B. *A Reply to Prof. Swallow on Certain Disputed Points in the Geology of Kansas and other North Western Localities*. 8vo. 9 pp. Springfield, 1869.
- *See, also*, Conrad, F. A., Pumpelly, Raphael, Whitney, J. D.
- and Gabb, W. M. *Geological Survey of California. Palæontology*. Vol. I. Carboniferous and Jurassic Fossils, by F. B. Meeks. Triassic and Cretaceous Fossils, by W. M. Gabb. Vol. II. Cretaceous and Tertiary Fossils, by W. M. Gabb. 2 vols. 8vo. 1864, 1869.
- MEGLITZKI and Antipoff. *Second Geognostical Description of the Southern portion of the Ural Chain, as explored in 1854 and 1855. (In Russian)*. 8vo. 435 pp. text; and a volume of Maps. St. Petersburg, 1858.
- MEIER, L. *Lehrbuch der höheren Mechanik*. 8vo. 459 pp. Hanover, 1858.
- MELANGES Physiques et Chimiques. *See under Journals*.
- MELSHEIMER, Friederich Ernest. *Catalogue of the described Coleoptera of the United States*. Revised by S. S. Haldeman and J. L. Leconte. *Smith. Misc. Coll.* 8vo. 174 pp. Washington, 1853.
- MÉMOIRE sur les ressorts en acier employés dans le matériel des Chemins du fer. 2 vols. in 1. 8vo. 142, 64 pp. Paris.
- MEMOIRS and Proceedings of the Chemical Society of London. } *See under Journals.*
- of the National Academy of Sciences, Washington, D. C. }
- MERBACH, F. M. *Die Anwendung der erwärmten gebläseluft*. 8vo. 365 pp. Leipsig, 1840.

- MERRETT, H. S. A Practical Treatise on the Science of Land and Engineering Surveying, Levelling, Estimating Quantities, &c. With a General Description of the Several Instruments Required for Surveying, Levelling, Plotting, &c.
8vo. 317 pp., XLI plates. London, 1863.
- METROPOLITAN Board of Health. *See, under Journals*, Annual Reports of the.
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- MICHEL, A., and Hunt, T. Sterry. Report on the Gold Region of Canada. Vol. XV., Pamphlets. Octavo series.
8vo. 72 pp. Montreal, 1866.
- *See, also*, Hunt, T. S.
- Levy. Note sur les Roches Porphyriques du Terrain Anthracifère.
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- Lehrbuch der Krystallographie. Uebersetzt und erweitert durch Dr. J. Grailich.
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- Huaenfels A. von. Höhre Markscheidekunst.
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- MILLIN, Aubin Lewis. Mineralogie Homerique.
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- Manual of Assaying. Third edition. 8vo. 697 pp. London, 1868.
- MOESTA, Federico. Plann de las pertenencias del mineral de Chancillo. 1862.
- MOHR, Friedrich. Lehrbuch der Chemischen Analytischen Titrimethode. 2 vols. 8vo. Brunswick, 1855, 1856.
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- MOHS, Friederich. Die Charactere der Klassen, Ordnungen, Geschlechter und Arten, oder die Charakteristik des Mineral-Systems. 8vo. 226 pp. Dresden, 1826.
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- Planet och Komet-Observationer, anställda år 1870, på Lunds Observatorium. Vol. IV., Pamphlets. Quarto series. 4to. 74 pp. London, 1871.

- MONITEUR Scientifique.
- MONTHLY Microscopical Journal.
- Report of the Department of Agriculture, Washington, D. C.
- Report of the Director of the Bureau of Statistics, Washington, D. C.
- MONTICELLI, T., and Covelli, N. Der Vesuv. 8vo. 234 pp. Elberfeld, 1824.
- Prodomo della Mineralogia Vesuviana. 8vo. 483 pp. Napoli, 1825.
- MONTPÉREUX, Frederick D. de. Voyage Autour du Caucase, chez les Tcherkesses et les Abkhases, en Colchide, en Géorgie, en Arménie et en Crimée. 4 vols. 12mo. Paris, 1859.
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- Mécanique Pratique. Hydraulique. 8vo. 638 pp., VII. plates. Paris, 1865.
- Nouvelles Expériences sur le Frottement faites à Metz. Vols. 1, 2, 3. 3 vols. 12mo. Paris, 1832–1835.
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- The Protective Question at Home: being the Substance of a Report of the Committee on Manufactures, submitted to the Fortieth Congress by Hon. D. J. Morrell, of Pennsylvania. With Supplementary Notes by John L. Hayes.
- MORRIS, J. G. Catalogue and Synopsis of the Lepidoptera of North America. Part 1. *Smith. Misc. Coll.* 8vo. 453 pp. Washington, 1860–1862.
- Catalogue of the Described Lepidoptera of North America. Part 1. Diurnal and Crepuscular. *Smith. Misc. Coll.* 8vo. 354 pp. Washington, 1860.
- MOSELY, H. Mechanical Principles of Engineering and Architecture, with additions by D. H. Mahan, LL. D. 8vo. 699 pp. New-York, 1806.

- MOTHES, O. Technological Dictionary. English, German, French. 8vo. 661 pp. Wiesbaden, 1870.
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- Hermann. Die Eisenerzlagertstätten des obern Erzgebirges und des Voigtlandes als grundlagen zur Erdbebung des Sächsischen Eisenhüttenwesens. 8vo. 36 pp. Freiberg, 1856.
- Johann. Lehrbuch der Meteorologie. Seventh edition, revised and enlarged. Vol. I. 8vo. 956 pp. Brunswick, 1868.
- Physics and Meteorology. 8vo. 573 pp. London, 1847.
- The Principles of Physics and Meteorology. 8vo. 565 pp. London, 1847.
- *See* Pouillet.
- MULLER, J. W. Fragmentarische Mittheilungen uber die in Afrika Gemachten Reisen. 4to. 38 pp. 1849.
- and A. Leucanhez. Nouvelle Méthode de Traitement au Hautes Fourneaux à Cuivre. 8vo. 28 pp. Liege, 1861.
- MUNICHSBORFER, Friedrich. Geschichtliche Entwicklung der Roheisen-Produktion in Kärnten. 8vo. 28 pp. Klagenfurt, 1873.
- MUNROE, Henry S. Geological Survey of Hokkaido, Japan. The Gold Fields of Yesso. 12mo. 80 pp. Tokei, 1875.
- Yesso Coals. 12mo. 39 pp. Tokei, 1874.
- MUNSELL, J. A Chronology of Paper and Paper Making. Third edition. 8vo. 174 pp. Albany, 1864.
- MURCHISON, R. J. Siluria. 8vo. 566 pp., XLI. plates. London, 1869.
- Verneuil, E. de, and von Keyserling, Alexander. The Geology of Russia in Europe and the Ural Mountains. Vol. I. Geology. 700 pp., VII. plates. Vol. II., (in French.) Paléontologie. 512 pp., L. plates. 2 vols. 4to. London, 1845.
- MURRAY, Andrew. The Geographical Distribution of Mammals. 4to. 420 pp. London, 1866.
- John. Elements of Chemistry. 2 vols. 8vo. Edinburgh, 1828.
- MUSEUM of Comparative Zoology at Harvard College. Annual Report of the Trustees, together with the Report of the Director. 8vo. 22 pp. Boston, 1868.
- MUSHET, David. Papers on Iron and Steel. Practical and Experimental. 8vo. 925 pp. London, 1840.

- MUSPRATT, Sheridan. Chemistry, Theoretical, Practical and Analytical, as applied to the Arts and Manufactures.
2 vols. 4to. London, 1860.
- Encyklopädisches Handbuch der Technischen Chemie.
Vol. I. Aether-Cyan. Edited by D. F. Stohman, 1865.
Vol. II. Dextrin-Gummi. “ “ D. F. Stohman, 1866.
Vol. III. Harze-Mangan. “ “ Bruno Kerl, 1868.
Vol. IV. Natrium-Strontium. Edited by Bruno Kerl, 1869.
Vol. V. Textilindustrie-Zirkonium. Edited by Bruno Kerl, 1870.
Vol. VI. Zucker-Nachträge. Edited by Bruno Kerl, 1870.
6 vols. Imp. 8vo. (Illustrated.) Brunswick.
- Outlines of Qualitative Analysis. 7 tables. London, 1850.
- Theoretische, practische und analytische Chemie in Anwendung auf Kunst und Gewerbe. Dritte Auflage. Frei bearbeitet von Bruno Kerl and F. Stohman.
Vol. I. Aether to Butter and Milch.
Vol. II. Cadmium to Firmis.
Vol. III. Lieferungs, 1, 2, 3.
2 vols. 4to. (Illustrated.) Brunswick, 1874.
- J. S., and Hofmann, A. W. Ueber neue Bildungsweisen des Anilins.
12mo. II. plates. Giessen, 1844.

N.

- NAPIER, James. A Manual of Electro-Metallurgy.
8vo. 356 pp. Philadelphia, 1853.
- A Manual of the Art of Dyeing.
8vo. 405 pp. Glasgow, 1853.
- NAQUET, A. Principles of Chemistry. Translated from the Second edition by W. Cortis. Revised by Thomas Stevenson.
8vo. 848 pp. London, 1868.
- NASON, Henry B. *See* Elderhorst, William.
- NATIONAL Academy of Sciences, Washington. *See, under Journals*,
Memoirs of the; *also*, Report of the.
- Association of Wool Manufacturers: Objects and Plan of the; its Organization and Articles of Association and By-Laws.
8vo. 20 pp. Boston, 1866.
- NATURAL History of the State of New-York. Reports on the Introduction.
188 pp.
- Part I. Zoology. De Kay, James E.
Div. 1. Mammalia. (Vol. 1.) 146 pp., XXXIII. plates. 1842.
Div. 2. Birds. (Vol. 2.) 380 pp., CLXI. plates. 1844.
Div. 3. Reptiles } (Vol. 3.) { 98 pp., XXIII. plates. 1842.
and Amphibia. }
Div. 4. Fishes. } 415 pp., LXXIV. plates. 1842.
Div. 5. Mollusca. } (Vol. 4.) { 271 pp., XL. plates. 1843.
Div. 6. Crustacea. } 70 pp., XIII. plates. 1843.
- Part II. Botany. Torrey, John. Vols. 1, 2. 484, 572 pp., LVIII., CLXI. plates. 1843.

NATURAL History of the State of New-York.

Part III. Mineralogy. Beck, Lewis C. 586 pp., XLI. plates, 1842.

Part IV. Geology.

Vol. 1. Mather, W. W. Survey of the First Geological District, embracing twenty-one Counties, extending from the north end of Washington County, between Lakes Champlain and George, southwestwardly to the Susquehanna River, and including all east and south of this District that lies within the limits of the State. 653 pp., XLVI. plates, 2 charts. 1842.

Vol. 2. Emmons, Ebenezer. Survey of the Second Geological District, comprising the Counties of Warren, Essex, Clinton, Franklin, St. Lawrence, Jefferson and Hamilton. 427 pp., XVII. plates. 1842.

Vol. 3. Vanuxen, Lardner. Survey of the Third Geological District, comprising the Counties of Montgomery, Fulton, Otsego, Herkimer, Oneida, Lewis, Oswego, Madison, Onondaga, Cayuga, Cortlandt, Chenango, Broome, Tioga, and the eastern half of Tompkins. 306 pp. 1842.

Vol. 4. Hall, James. Survey of the Fourth Geological District, comprising the Counties of Wayne, Monroe, Orleans, Niagara, Seneca, Ontario, Yates, Livingston, Genesee, Erie, the western part of Tompkins, Chemung, Steuben, Alleghany, Cattaraugus and Chataugue. 683 pp., XIX. plates, 2 charts. 1843.

Part V. Agriculture. Emmons, Ebenezer. Vols. 1, 2, 3, (text and plates,) 4, 5. 1843.

Part VI. Palæontology. Hall, James.

Vol. 1. Organic Remains of the Lower Division of the New-York System. 338 pp., LXXXV. plates.

Vol. 2. Organic Remains of the Lower Middle Division of the New-York System. 362 pp., LXXXIV. plates. 1859.

Vol. 3. Organic Remains of the Lower Helderberg Group and the Oriskany Sandstone. Text, 532 pp.; Atlas, CXX. plates.

Vol. 4. Part I. Fossil Brachiopoda of the Upper Helderberg, Hamilton, Portage, and Chemung Groups. 428 pp., LXIII. plates. 1852. 22 vols. 4to. Albany, 1842-1867.

NATURE. London. *See under Journals.*

NATURKUNDIGE Verhandelingen van den Hollandisch Maatschappij der Wetenschappen te Haarlem.

Tweed Verzameling Vijfde Deel. 4to. 75 pp., V. charts. Haarlem, 1849.

NATURWISSENSCHAFTLICHE Abhandlungen. *See under Journals.*

NAVIER, Louis. Lehrbuch der höheren Mechanik.

12mo. 459 pp. Hanover, 1858.

——— L'Application de la Mécanique à L'Établissement des Constructions et des Machines. 8vo. 448 pp. Paris, 1833.

——— Résumé des Leçons d'Analyse. 2 vols. 8vo. Paris, 1856.

- NEILSON, W. G. A Statistical Chart, Illustrating the Growth of the Trade, the Development of the Internal Resources, and the Fluctuations in the Prices of the various Staple Products of the United States, from 1799 to 1869. Published by the Iron and Steel Association, Philadelphia.
- NEUBAUER, C., and Vogel, J. Anleitung zur Qualitativen und Quantitativen Analyse des Harnes zum gebrauch für Medeciner und Pharmaceuten. 8vo. 294 pp. Weisbaden, 1856.
- NEUBERT, E. W. Stammbaum über die Aufbereitung der Erzmassen von den Gängen der Kiesigen Bleiformation. 1 sheet, folio. Freiberg.
- NEUES Journal der Physik. *See under Journals.*
- NEUMAN, Casper. The Chemical Works of, with large additions containing the later Discoveries and Improvements in Chemistry and the Arts depending thereon, by William Lewis. 2 vols. 8vo. London, 1773.
- and Baretti. A Dictionary of the Spanish and English Languages. 8vo. 1335 pp. Boston, 1852.
- NEUMANN, C. F. Anfangsgrunde der Krystallographie. 8vo. 292 pp. Leipsig, 1854.
- Elemente der Mineralogie. Third edition. 8vo. 448 pp. Leipsig, 1852.
- The same as above. Sixth edition. 8vo. 500 pp. Leipsig, 1864.
- The same as above. Seventh edition. 8vo. 566 pp. Leipsig, 1868.
- The same as above. Eighth edition. 8vo. 606 pp. Leipsig, 1871.
- Lehrbuch der Geognosie. 2 vols. 8vo. Leipsig, 1858.
- NEVADA. Annual Report of the State Mineralogist. *See under Journals.*
- NEWBERRY, J. S. A Chart of Geological History, prepared for the Students in the School of Mines, Columbia College. Vol. XX., Pamphlets. Octavo series.
- Description of Fossil Fishes from the Carboniferous Strata of Ohio. Vol. XXI., Pamphlets. Octavo series. 8vo. 5 pp. 1856.
- Description of Fossil Plants, from the Chinese Coal-Bearing Rocks. Vol. VII., Pamphlets. Octavo series. 4to. 5 pp., 1. plate. Philadelphia, 1865.
- Description of Fossil Plants collected by Mr. George Gibbs, Geologist of the United States Northwest Boundary Commission. Vol. XXIII., Pamphlets. Octavo series. 8vo. 19 pp. Cambridge, 1863.
- Geological Report on the Lands of the Indian Creek and Jack's Knob Coal, Salt, Lead, Lumber, Oil and Manufacturing Company. Vol. XXXII., Pamphlets. Octavo series. 8vo. 20 pp. Cincinnati, 1866.
- Modern Scientific Investigation; its Methods and Tendencies. 8vo. 23 pp. Salem, 1867.
- Notes on American Fossil Fishes. Vol. XXI., Pamphlets. Octavo series. 8vo. 6 pp. 1862.

- NEWBERRY, J. S. Notes on the Surface Geology of the Basin of the Great Lakes. Vol. XV., Pamphlets. Octavo series. 8vo. 7 pp. Boston, 1862.
- Report on the Economical Geology of the Route of the Ashtabula and New-Lisbon Rail-Road. Vol. XXIV., Pamphlets. Octavo series. 8vo. 47 pp., I. Map. Cleveland, Ohio.
- Report on the Geology of California and Oregon, for Pacific Rail-Road Survey. 4to. 85 pp. Washington, 1856.
- Report on the Oil Lands of Crocus Creek, Cumberland County, Ky. Vol. XXXII., Pamphlets. Octavo series. 8vo. 12 pp. Cleveland, Ohio, 1865.
- Report on the State House Well, Columbus, Ohio. Vol. XXV., Pamphlets. Octavo series. 8vo. 11 pp. 1860.
- The Geological Survey of Ohio.
Part 1. Report of Progress in 1869, by J. S. Newberry.
Part 2. Report of Progress in the Second District, by E. B. Andrews.
Part 3. Report on the Geology of Montgomery County. 8vo. 164 pp. Columbus, 1870.
- Report of Progress in 1870. 8vo. 568 pp. Columbus, 1871.
- Final Report. Vol. I. Geology and Palæontology.
Part 1. Geology. 680 pp.
Part 2. Palæontology. 399 pp., XLVIII. plates. 2 vols. 8vo., and a portfolio of Maps. Columbus, 1873.
- The Iron Resources of the United States. Reprinted from the International Review. 8vo. New-York, 1874.
- The Rock Oils of Ohio. Vol. XXV., Pamphlets. Octavo series. 8vo. 16 pp. 1859.
- The Surface Geology of Ohio. Reprinted from Geological Survey of Ohio. Vol. II. 8vo. Columbus, 1874.
- NEWCOMB, S. *See under* Washington Astronomical and Meteorological Observations, 1870. App. 3.
- NEWTON, H. A. On Shooting Stars. 4to. 22 pp.
- NEW-YORK and Eldorado Gold Mining Company. *Report of the American Bureau of Mines.* 4to. 15 pp. New-York, 1867.
- State Agricultural Society. *See, under Journals*, Transactions of the.
- State Library. Annual Reports and General Catalogues. A series of Annual Reports, comprising the additions made to the Library during the years 1848 to 1872. 17 vols. 8vo. Albany, 1848-1873.
- Complete Catalogue of the Library. 8vo. 294 pp. Albany, 1846.
- The same as above. Vol. I. General Library. 8vo. 987 pp. Albany, 1856.
- The same as above. Vol. II. Law Library. 8vo. 402 pp. Albany, 1856.
- The same as above. Vol. III. Maps, Manuscripts, Medals, &c. 8vo. 274 pp. Albany, 1857.

- NEW-YORK State Library. The same as above. General Library.
First Supplement. 8vo. 1084 pp. Albany, 1861.
—— The same as above. Law Library. First Supplement.
8vo. 180 pp. Albany, 1865.
- NICOL, J. Manual of Mineralogy; or, the Natural History of the
Mineral Kingdom. 8vo. 596 pp. Edinburgh, 1849.
- NIEDERIST, J. Grundzüge der Bergbaukunde.
8vo. 284 pp. Prag, 1863.
- NÖGGERATH, J. Das Erdbeben vom Juli 29, 1846.
4to. 60 pp. Bonn, 1847.
- NORMANDY, A. A Handbook of Commercial Analysis. Second
edition. 8vo. 64 pp. London, 1865.
—— The Farmer's Manual of Agricultural Chemistry, with In-
structions respecting the Diseases of Cereals, and the Destruction
of the Insects which are Injurious to those Plants.
12mo. 218 pp. London, 1853.
- NORTON, W. A. On Molecular Physics. Vol. V., Pamphlets. Octavo series.
8vo. 95 pp. 1864.
- NOTIZEN zur Zammeling von Zeichnungen für die Hütte. *See*
under Journals.
- NYLANDER, C. W. G. Bidrag till Kannedomen om Zirkonjörd.
Vol. IX., Pamphlets. Quarto series. 4to. 25 pp.
- NYST, H., Jr. Recherches sur les Coquilles Fossiles de Housselt et
de Kleyn-Spauwen. Vol. XXII., Pamphlets. Octavo series.
8vo. 40 pp., IV. plates. Gand, 1836.

O.

- OBERSCHLESISCHEN Taschenbuch und Kalender. *See under Jour-*
nals.
- ODERHEIMER, F. Das Berg-und Hüttenwesen im Herzogthum
Nassau. 8vo. Weisbaden, 1865.
- ODLING, William. A Course of Practical Chemistry.
12mo. 241 pp. London, 1865.
- OESTEN SACKEN, R. Catalogue of the described Diptera of North
America. Prepared for the Smithsonian Institute. *Smith.*
Misc. Coll. 8vo. 221 pp. Washington, 1838.
- Monographs of the Diptera of North America. Prepared
for the Smithsonian Institute. Part IV. *Smith. Misc. Coll.*
8vo. 344 pp. Washington, 1869.
- OESTERREICHISCHES Montan Handbuch. }
—— Zeitschrift für Berg-und Huettenmann. } *See under*
Journals.
- OFFICIAL Gazette of the United States Patent Office, }
- OGÉRIEN, Le Frère. *See Histoire Naturelle du Jura et des Depart-*
ments Voisins.
- OLCOTT, H. S. Outlines of the First Course of Yale Agricultural
Lectures, with an Introduction by John A. Porter.
12mo. 186 pp. New-York, 1860.
- OLIVIER, Théodore. Compléments de Géométrie Descriptive.
8vo. text, 4to. plates. Paris, 1848.

- OLIVIER, Théodore. Cours de Géométrie Descriptive.
2 vols. 4to. text and plates. Paris, 1847-1852.
- Développement de Géométrie Descriptive.
8vo. text, 4to. plates. Paris, 1843.
- Thomas. Applications de la Géométrie Descriptive aux ombres, à la Perspective, à la Gnomique et aux Engrenages.
8vo. text, 4to. plates. Paris, 1847.
- Mémoires de Géométrie. Descriptive, Theoretique et Appliquée.
8vo. text, 4to. plates. Paris, 1852.
- OLSSON, P. Nova genera parasitantia Copepodorum et Platylimnithium. Vol. X., Pamphlets. Quarto series. 4to. 6 pp., I. plate.
- ONONDAGA Salt Company of Syracuse, New-York. Prospectus of the. Vol. XXVII., Pamphlets. Octavo series.
8vo. 50 pp. Syracuse, 1867.
- OPPERMANN, C. A. See Exposition Universelle de Paris, en 1867.
- ORFILA, M. J. B. Eléments de Chimie appliquée à la Medicine et aux Arts. Fifth edition. 2 vols. 8vo. Paris, 1831.
- OTT, Adolph. The Art of Manufacturing Soap and Candles.
12mo. 193 pp. Philadelphia, 1867.
- OTTO, Friederich Julius. Anleitung zur Ausmittlung der Gift.
Third edition. 8vo. 111 pp. Brunswick, 1856.
- Ausführliches Lehrbuch der Chemie. Mit Benutzung des Allgemeinen Theiles von Dr. Thomas Graham's Elements of Chemistry. Dritte Auflage. Anorganischen Chemie. Vol. II. Parts 1, 2, 3.
3 vols. 8vo. Brunswick, 1852, 1853, 1854.
- OVERMAN, Frederick. A Treatise on Metallurgy, comprising Mining, and General and Particular Metallurgical operations.
Sixth edition. 8vo. 723 pp. New-York, 1865.
- Practical Mineralogy, Assaying and Mining.
8vo. 230 pp. Philadelphia, 1863.
- Ueber das frischen des Roheisens, nebst Anweisung.
8vo. 112 pp. Brunn, 1838.
- OWEN, David Dale. Geological Reconnoissance of Middle and Southern Arkansas, made in 1859 and 1860.
8vo. 433 pp. Philadelphia, 1860.
- Report of a Geological Reconnoissance of the State of Indiana, made in 1837. 8vo. 69 pp. Indianapolis, 1869.
- Report of a Geological Survey of Wisconsin, Iowa and Minnesota.
2 vols. 4to. text and plates. Philadelphia, 1852.
- Third Report on the Geological Survey of Kentucky, 1856, 1857. 4to. 589 pp. Frankfort, Ky., 1857.
- Robert, Peter, and Sydney, S. Lyon, and others. Report of the Geological Survey of the State of Kentucky, made during the years 1854 to 1859.
4 vols. 8vo. Frankfort, 1856-1861.
- W., Elderhorst, and E. T. Cox. First and Second Reports of a Geological Reconnoissance of Northern Arkansas, during 1857 and 1858. 8vo. 256, 433 pp. Little Rock, 1858-1860.

- OWEN, Richard. Report of a Geological Reconnoissance of Indiana.
8vo. 368 pp. Indianapolis, 1862.
- R. The Principal Forms of the Skeleton and the Teeth.
12mo. 329 pp. Philadelphia, 1854.
- OXLAND, Robert. *See* Scoffern and Oxland.

P.

- PACIFIC Rail-Road Reports. *See* Explorations and Surveys for a Rail-Road Route from the Mississippi to the Pacific Ocean.
- PACKARD, A. S., Jr. Directions for Collecting and Preserving Insects. Prepared for the Smithsonian Institute. *Smith. Misc. Coll.*
8vo. 54 pp. Washington, 1873.
- PAGE, David. Hand-Book of Geological Terms and Geology.
12mo. 416 pp. London, 1859.
- *Lieut.* *See* Washington Astronomical and Meteorological Observations.
- PAGET, F. A. Ueber eine internationale Assimilirung der Patent-gesetze.
8vo. 33 pp. Berlin, 1873.
- PAINE, H. *See* Proteaux, A.
- J. A., Jr. Catalogue of Plants found in Oneida County, N. Y., and Vicinity. Vol. XXVI., Pamphlets. Octavo series.
8vo. 140 pp. 1865.
- PALAEONTOGRAPHICA. *See* Dunker, Wilh.
- PALMIERI and Secchi. Della regione vulcanica del monte Vulture.
4to. 160 pp.
- PANDER, C. H. Beiträge zur Geognosie des Russichen Reiches.
4to. 165 pp. St. Petersburg, 1830.
- Ueber die Placodermen des Devonischen Systems.
4to. 106 pp., XII. plates. St. Petersburg, 1867.
- Ueber die Saurodipterinen, Dendrodonten, Glyptolepiden und Cheirolepiden des Devonischen Systems. Vol. VI., Pamphlets. Quarto series. 4to. 89 pp., XVII. plates. St. Petersburg, 1860.
- PARIS Exposition, 1867. *See* Exposition Universelle de Paris, en 1867.
- PARKER, *Lieut.* *See under* Washington Astronomical and Meteorological Observations.
- PARKES, Samuel. The Chemical Catechism.
12mo. 576 pp. New-York, 1821.
- PARKINSON, James. An Introduction to the Study of Fossil Organic Remains.
8vo. 350 pp. London, 1830.
- PARKMAN, T. On the Carbonates of Alumina, Glucina and the Sesquioxys of Iron, Chromium and Uranium. Vol. XXXI., Pamphlets. Octavo Series.
8vo. 10 pp. 1862.
- PARMELLE, Abbé. Quellenkunde. 16mo. 341 pp. Leipsig, 1856.
- PARROT, Frederick. Account of a Journey to Ararat. Illustrated. Translated by W. D. Cooley.
12mo. 379 pp. New-York, 1846.

- PARRY, C. C. *See under* United States and Mexican Boundary Survey.
- PARTSCH, Paul. Katalog der Bibliothek des K. K. Hof—Mineralien Cabinets in Wien. 4to. 232 pp. Vienna, 1851.
- Uebersicht der im K. K. Hof—Mineralien-Kabinet zu Wien zu Schaugestellten acht Sammlung. 12mo. 144 pp. Vienna, 1855.
- PASLEY, C. W. Observations on Lime, Calcareous Cements, Mortars, Stuccos and Concrete. 12mo. 208 pp. London, 1847.
- PATENT OFFICE, Reports, &c. *See* British Patent Office; *see, also, under Journals*, Commissioner (The) of Patents' Journal; Official Gazette of the United States Patent Office; *also*, United States Patent Office Gazette.
- Reports. Abridgments of Specifications, &c. *See under* British Patent Office; *also*, United States Patent Office. *See, also, under Journals*, &c.
- PATERA, Adolph. Ueber Flammeschutzmittel. Vol. VII., Pamphlets. Octavo series. 8vo. 34 pp. Vienna, 1871.
- PAUL, Benjamin H. A Manual of Technical Analysis. Founded upon the Handbuch der Technisch-Chemischen Untersuchungen. 12mo. 426 pp. London, 1857.
- PAYEN, A. Précis de Chimie Industrielle. Fifth edition. Vol. I. 8vo. 704 pp. Paris, 1867.
- PEASE, J. B. *See* Tunner, P.
- PECK, W. G. A Practical Treatise on the Differential and Integral Calculus, with some of its applications to Mechanics and Astronomy. 12mo. 208 pp. New-York, 1873.
- A Treatise on Analytical Geometry. 12mo. 212 pp. New-York, 1874.
- Elementary Treatise on Mechanics. 8vo. 296 pp. New-York, 1872.
- PECKHAM, S. F. On Asphalt. Vol. XXIV., Pamphlets. Octavo series. 8vo. 22 pp. Providence, 1868.
- PÉCLET, E. Traité de la Chaleur, Considérée dans ses Applications. Third edition. 3 vols. 8vo. Paris, 1860, 1861.
- PELZ, E. Compass für Auswanderer. 16mo. 142 pp. Leipsig, 1869.
- PEPPER, John H. The Playbook of Metals. 8vo. 504 pp. London, 1862.
- PERARD, L. Traité du Chauffage et de la Conduite des Machines à Vapeur, Fixé et Locomotives. 8vo. 230 pp. Paris, 1864.
- PERCY, John. Die Metallurgie. Vol. I. Translated and Edited by Dr. F. Knapp. 594 pp. 1862.
- Vol. II. Translated and Edited by Dr. H. Wedding. Part I. 609 pp. 1864. Part II. 864 pp. 1873. Part III. Lieferungs, 1, 2.
- Vol. III. Translated and Edited by Dr. H. Wedding and Dr. C. Rammelsberg. 371 pp. 4 vols. 8vo. Brunswick.

PERCY, John. Metallurgy. The Art of Extracting Metals from their Ores, and Adapting them to Various Purposes of Manufacture.

Vol. I. Fuel, Fireclays, Copper, Zinc, Brass, &c. 634 pp. 1861.

Vol. II. Iron and Steel. 934 pp. 1864.

Vol. III. Lead, including Desilverization and Cupellation. 567 pp. 3 vols. 8vo. London, 1870.

——— *Traité Complet de Metallurgie.* Translated under the auspices of the Author, with an Introduction and Appendix by Messrs. Petitgaud and A. Ronna.

5 vols. 8vo. Paris, 1864–1867.

PERDONNET, Auguste. *See* Coste, Leon.

PERRAULT, J. *Revue Agricole, Manufacture, Commerciale et de Colonisation.* 8vo. 384 pp. Montreal, 1863, 1864.

PERRY, M. C. *See* Expedition of an American Squadron to the China Seas and Japan.

PERUTZ, H. *Wärme-und Brennmaterialien, ihre Anwendung für industrielle Zwecke.* 8vo. 202 pp. Berlin, 1864.

PETERS, C. F. *Mineralogische Notizen, No. 3. Miscellaneen.* Vol. X., Pamphlets. Octavo series. 8vo. 12 pp.

——— Theodore C. *A Report on the Agricultural and other Resources of the State of New-York.*

8vo. 152 pp. Albany, 1864.

PETERSEN, Theodor. *Die Chemische Analyse.*

Vol. I. *Die Qualitative Analyse.* 270 pp.

Vol. II. *Die Quantitative Analyse.* 270 pp.

2 vols. in 1. 12mo. Berlin, 1863, 1864.

PETIET, J. *See* Flachet, E.

PEYRITSCHKE, J. *Über einige Pilze aus der Familie der Laboulbenien.* 8vo. 12 pp. Vienna, 1871.

PFAFF, Friedrich. *Allgemeine Geologie als exacte wissenschafte mit einen anhang Geologische Versuche.*

8vo. 318 pp. Leipsig, 1873.

PFANNENSCHMIDT, L. *Die Fabrikation des Zinnes.*

16mo. 26 pp. Quedlinburg, 1837.

PHARMACEUTISCHES Central-Blatt. *See under Journals.*

PHILIP, A. P. W. *The Laws of the Vital Functions.*

8vo. 335 pp. Philadelphia, 1818.

PHILLIP. *Memoire sur les Ressorts en Acier employés dans le Matériel des Chemins de Fer.* 142 pp., I. plate.

Manuel Pratique pour L'Étude et la Calcul des Ressorts en Acier employés dans le Matériel des Chemins de Fer. 68 pp., I. plate.

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Theorie de la Coulisse servant à produire la Detente Variable dans les Machines à Vapeur et particulierement dans les Machines Locomotives. 64 pp., I. plate.

8vo. Paris, 1852, 1853.

PHILLIPS, J. Arthur. *A Manual of Metallurgy.*

8vo. 619 pp. London, 1859.

- PHILLIPS, J. Arthur. The Mining and Metallurgy of Gold and Silver.
8vo. 532 pp. London, 1867.
- John. Geology of Yorkshire.
Part I. The Yorkshire Coast. 184 pp., XXIV. plates.
Part II. The Mountain Limestone District. 253 pp., XXV.
plates. 2 vols. 4to. London, 1835, 1836.
- William. An Elementary Introduction to the Knowledge
of Mineralogy. 8vo. 406 pp. London, 1823.
- The same as above. Fifth edition, by F. Alger.
8vo. 662 pp. Boston, 1844.
- The same as above. Sixth edition. Edited by H. J. Brooke
and W. H. Miller. 8vo. 700 pp. London, 1852.
- and Darlington. Records of Mining and Metallurgy.
8vo. 304 pp. London, 1857.
- PHILOSOPHICAL Magazine; also Philosophical Magazine and Journal
of Science. *See, under Journals*, London, Dublin and Edin-
burgh Philosophical Magazine and Journal of Science.
- PHOTOGRAPHS of the Burleigh Drill, made by the Putnam Machine
Co., Fitchburg, Mass. 2 views.
——— of the Hoosic Tunnel. 2 views.
- PIERCE, Benjamin. On the Saturnian System. 4to. 31 pp.
- *See under* United States Coast Survey.
- C. H. Examinations of Drugs, Medicines, Chemicals, &c.
12mo. 264 pp. Philadelphia, 1853.
- PIGGOT, A. S. The Chemistry and Metallurgy of Copper.
12mo. 388 pp. Philadelphia, 1858.
- PIKE, John Robert. Britain's Metal Mines. A Complete Guide
to their Laws, Usages, Localities and Statistics. vol. II.,
Pamphlets. Octavo series. 8vo. 66 pp. London, 1871.
- Z. M. An Account of Expeditions to the Sources of the
Mississippi, and through the Western Parts of Louisiana to
the Sources of the Arkansas, Kansas, La Platte and Pierre
Jaun Rivers; and a Tour through the Interior Parts of
New Spain, in 1807.
8vo. 277 pp., and 3 appendices. Philadelphia, 1810.
- PITT, John. How to Brew Good Beer. Second edition.
8vo. 148 pp. London, 1864.
- PLANE Table, (The,) and its Use in Topographical Surveying.
Vol. I., Pamphlets. Quarto series.
8vo. 79 pp., V. plates. New-York, 1869.
- PLATTNER, Carl Freidrich. Beiträge zur Erweiterung der Probir-
kunst. 12mo. 106 pp. Freiberg, 1849.
- Die Probirkunst mit dem Löthrohre oder Anleitung
Mineralien, Erze, Hüttenproducte und Verschiedene Metall-
verbindungen zu untersuchen. 8vo. 652 pp. Leipsig, 1847.
- The same as above. Fourth edition.
8vo. 680 pp. Leipsig, 1865.
- Manual of Qualitative and Quantitative Blowpipe Analysis.
Translated by H. B. Cornwall.
8vo. 548 pp. New-York, 1872.

- PLATTNER, Carl Freidrich. Vorlesungen über Allgemeine Hüttenkunde. 2 vols. in 1. 8vo. Freiberg, 1860-1863.
- POGGENDORFF, Johann Christian. Biographisch Literärisches Handwörterbuch zu Geschichte der Exacten Wissenschaften. 2 vols. 8vo. Leipsig, 1858-1863.
- POGGENDORFF's Annalen. *See under Journals.*
- POISSON, S. D. Traité de Mécanique. Second edition. 2 vols. 8vo. Paris, 1833.
- POLAIN, L. L'Histoire de L'Ancien Pays de Liege. 2 vols. 8vo. Liege, 1844.
- Récits Historiques sur L'Ancien Pays de Liege. 12mo. 461 pp. Brussels, 1866.
- POLE, W. A Treatise on the Cornish Pumping Engine. 4to. 236 pp. London, 1844.
- POLYTECHNIC College of Pennsylvania. A Statement of the Objects, Course of Instruction, &c., of the School of Mines, organized and opened in Philadelphia, under an Act of the Legislature incorporating the Polytechnic College of the State of Pennsylvania. Vol. XIX., Pamphlets. Octavo series. 8vo. 4pp. Philadelphia, 1853.
- POLYTECHNISCHES Central Blatt. } *See under Journals.*
 ——— Journal.
 ——— Notizblatt.
- PONCELET, J. V. Cours de Mécanique Appliquée aux Machines. 8vo. 520 pp., II. plates. Paris, 1874.
- and Lesbros. Experiences Hydrauliques sur les Lois de L'Ecoulement de L'Eau. 4to. 262 pp., VIII. plates. Paris, 1832.
- PONSON, A. T. Handbuch des Steinkohlen-Bergbaues. 2 vols. 4to. Weimar, 1855.
- Traité de L'Exploitation des Mines de Houille. 2 vols. 8vo. text; 2 vols. 4to. plates.
- Supplement to above. 2 vols. 8vo. text; 2 vols. 4to. plates. Paris, 1867, 1868.
- PORTER, J. A. Principles of Chemistry. 8vo. 474 pp. New-York, 1857.
- POUILLET, Claude S. M. Éléments de Physique Experimentale et de Meteorologie. Second Edition. 4 vols. 8vo. Paris, 1832.
- Same as above. Seventh edition. 2 vols. 8vo. text; 8vo. LXIX. plates. Paris, 1856.
- Lehrbuch der Physik und Meteorologie. Fourth edition, edited by Dr. J. Muller. 2 vols. 8vo. Brunswick, 1852.
- Same as above. Fifth edition. 2 vols. 8vo. Brunswick, 1858.
- Same as above. Seventh edition, edited by Dr. J. Muller. Vol. I. 8vo. 961 pp. Brunswick, 1868.
- POWELL, B. A Treatise on Optics. 8vo. 183 pp. Oxford, 1833.
- PRATT, N. A. Ashley River Phosphates. History of the Marls of South Carolina, and of the Discovery and Development of the Native Bone Phosphates of the Charleston Basins. 8vo. 28 pp. Philadelphia, 1868.

- PRIME, Frederick, Jr. Desilverization of Lead by Zinc. Vol. VII., Pamphlets. Octavo series. 8vo. 18 pp., II. plates. 1870.
- Temple. Monograph of American *Corbiculadæ*. *Smith. Misc. Coll.* 8vo. 80 pp. Washington, 1865.
- PROCEEDINGS and Transactions of the Nova Scotia }
 Institute of Natural Science. } *See under*
 — of the Academy of Natural Science, Philadel- } *Journals.*
 phia. }
- at the Centennial of Chemistry, held August 1, 1874, at Northumberland, Pa. *Rep. from Am. Chemist.* 4to. 209 pp. Philadelphia, 1875.
- of the American Iron and Steel Association, and of the Convention of Iron and Steel Makers, held in Philadelphia. Vol. VII., Pamphlets. Octavo series. 8vo. 22 pp. Philadelphia, 1874.
- of the Annual Meetings of the Board of Super- }
 — of the Chemical Society of London. } *See under*
 — of the Essex Institute. } *Journals.*
 — of the Lyceum of Natural History. }
- PROCESSES of Manufacture and Uses of Printing, Gas-light, Pottery, Glass and Iron. *From the Encyclopedia Britannica.* 8vo. 392 pp. New-York, 1864.
- PROCTOR, Richard A. Transits of Venus. A Popular Account of Past and Coming Transits, from the first observed by Horrocks, A. D. 1839, to the transit of A. D. 2012. 8vo. 232 pp. New-York, 1875.
- PROFESSIONAL Papers of the Corps of Engineers of the United States Army. *See* Barnard, J. G.; *also*, Lee, Thomas.
- Papers of the Corps of Royal Engineers. Vols. I. to X. 4to. London, 1837-1849.
- PROFIL-ZEICHNUNGEN der Actien Gesellschaft für Eisen-Industrie zum Styrum. 17 Lithographed charts, folio.
- des Eisen-und Stahlwerkes Reschitza Banat. 39 charts. Folio.
- PROSTRATION of American Industry. Repeal of the Ten Per Cent. Reduction of Duties. Verbatim Report of an Interview between a Delegation of Manufacturers and the Committee of Ways and Means of the House of Representatives at Washington, April 28, 1874. 8vo. 12 pp. Philadelphia, 1874.
- PROTEAUX, A. A Practical Guide for the Manufacturing of Paper and Boards. Translated by H. Paine; to which is added, a chapter on the Manufacture of Paper from Wood in the United States, by Henry T. Brown. 8vo. 292 pp. Philadelphia, 1866.
- PRUD 'HOMME, L. Cours Pratique de Construction. 2 vols. 8vo. Paris, 1870.
- PUGH, E. A Report upon a Plan for the Organization of Colleges of Agriculture and the Mechanic Arts, with special reference to the Organization of the Agricultural College of Pennsylvania. Vol. XVIII., Pamphlets. Octavo series. 8vo. 35 pp. Harrisburgh, 1864.

- PUISSANT, L.** *Traité de Geodesie, ou Exposition des Methodes Astronomiques et Trigonometriques, Appliquées à la mesure de la Terre, soit à la confection du canevas des Cartes et des Plans.* 4to. 318 pp., XVI. tables, X. plates. Paris, 1865.
 ——— *Traité de Topographie, D'Arpentage et de Nivellement.* 4to. 429 pp. Paris, 1807.
PUJOULX, J. B. *Mineralogie à L'Usage des Gens du Monde.* 12mo. 533 pp. Paris, 1813.
PUMPELLE, Raphael. *See Reports on the Geological Survey of the State of Missouri.*

Q.

- QUARTERLY Journal of Science.**
 ——— *Journal of the Chemical Society.*
 ——— *Weather Report of the Meteorological Office,* } *See under*
 London. } *Journals.*
QUENSTEDT, Friedrich Auguste. *Atlas des Petrefactenkunde.* 8vo. 86 pp. Tübingen, 1867.
 ——— *Der Jura.* 2 vols. 8vo. text, and atlas of plates. Tübingen, 1858.
 ——— *Die Mastonsaurien.* Folio. 34 pp. Tübingen, 1850.
 ——— *Grundriss der bestimmenden und rechnenden Krystallographie nebst einer historischen anleitung.* 8vo. 443 pp. Tübingen, 1873.
 ——— *Handbuch der Mineralogie.* 8vo. 728 pp. Tübingen, 1855.
 ——— *The same as above.* 8vo. 816 pp. Tübingen, 1863.
 ——— *Handbuch der Petrefactenkunde.* 8vo. 982 pp. Tübingen, 1867.
 ——— *Klar und Wahr. Neue Reihe populärer Vorträge über Geologie.* 8vo. 322 pp. Tübingen, 1872.
 ——— *Methode der Krystallographie.* 8vo. 412 pp. Tübingen, 1840.
 ——— *Petrefactenkunde Deutschlands mit Besonderer Rücksicht auf Wurtemberg.* 12mo. 580 pp. Tübingen, 1846.
 ——— *Petrefactenkunde. Die Celphalopoden.* 8vo. 580 pp. text; Atlas, 4to. XXXVI. plates.
 ——— *Sonst und Jetzt. Populäre Vorträge über Geologie.* 8vo. 288 pp. Tübingen, 1856.
QUICKSILVER Mining Co. *Annual Report of the President.* vol. XXXII., Pamphlets. Octavo series. 8vo. 54 pp. 1867.

R.

- RACHETTE, Waldemar. Description of his Patent Universal Blast and Smelting Furnace. Vol. VII., Pamphlets. Octavo series.
8vo. 9 pp. New-York, 1864.
- RACKEBRANDT, A. Der Metallarbeiter.
16mo. 52 pp. Leipzig, 1838.
- RAILWAY World. *See under Journals.*
- RAMBOSSON, J. Astronomy. Translated by C. B. Pitman.
8vo. 385 pp. New-York, 1874.
- RAMMELSBERG, Karl Friederich. Die Chemische Natur der Meteoriten.
4to. 160 pp. Berlin, 1870.
- Handbuch der Krystallographischen Chemie.
8vo. 410, 227 pp. Berlin, 1855.
- Handbuch der Mineralchemie.
8vo. 1038 pp. Leipzig, 1860.
- Handwörterbuch des Chemischen Theils der Mineralogie.
8vo. 778 pp. Berlin, 1841.
- First Supplement to above. 160 pp. 1843.
- Second Supplement to above. 180 pp. 1845.
- Third Supplement to above. 150 pp. 1847.
- Fourth Supplement to above. 272 pp. 1849.
- 4 Supplements in 1 vol. 8vo. Berlin.
- Fifth Supplement to above. 8vo. 270 pp. Berlin, 1853.
- Lehrbuch der Chemischen Metallurgie. Second edition.
8vo. 480 pp. Berlin, 1865.
- Lehrbuch der Krystallkunde. 8vo. 236 pp. Berlin, 1852.
- Lehrbuch der Stoichiometrie und der Allgemeinen Theoretischen Chemie.
8vo. 386 pp. Berlin, 1842.
- Leitfaden für die qualitative chemische Analyse mit besonderer rucksicht auf Heinrich Rose's ausführliches Handbuch der analytischen Chemie. Fifth edition.
12mo. 151 pp. Berlin, 1867.
- Leitfaden für die quantitative chemische Analyse. Second edition.
8vo. 322 pp. Berlin, 1863.
- Ueber der Mittel, Lichte und Wärme. *Sammlung gemeinschaftlicher Wissenschaftlicher Vorträge.* Vol. I., Pamphlets. Duodecimo series.
12mo.
- Ueber die Isomorphie der Sulphate von Kadmium, Didym und Titrium. Vol. XII., Pamphlets. Octavo series.
8vo. 8 pp. 1861.
- Ueber einigen nordamerikanischen Meteoriten.
8vo. 5 pp. 1861.
- Ueber die Verbindung des jodsauen Natrons mit dem Chlornatrium.
8vo. 2 pp. 1861.
- Vergleichende Bemerkungen über die Krystallform organischer Verbindungen vom Typus des Antimoniaks. Vol. IX., Pamphlets. Octavo series.
8vo. 11 pp.

- RAMSAY, Andrew C.; Bristow, H. W.; Geikel, A., and Bauermann, H. A Descriptive Catalogue of the Rock Specimens in the Museum of Practical Geology, with Explanatory Notices of their Nature and Mode of Occurrence in Place. Third edition, revised and partly re-written. 12mo. 291 pp. London, 1862.
- RAMSDEN, Jesse. Description of an Engine for Dividing Mathematical Instruments. 4to. 30 pp., VII. plates. London, 1777.
- RANKEN, Francis A. The Strains in Trusses computed by means of diagrams, with Twenty Examples, drawn to scale. 8vo. 63 pp. New-York, 1872.
- RANKINE, William J. M. A Manual of Civil Engineering. 8vo. 784 pp. London, 1867.
- RASPAIL, F. V. Nouveau Système de Chemie Organique. 8vo. 576 pp. Paris, 1833.
- RATH, G. von. Krystallographische Beiträge. Vol. II., Pamphlets. Duodecimo series. 12mo. 28 pp., I. plate. 1860.
- Mineralogische Mittheilungen, No. 3. Vol. X., Pamphlets. Octavo series. 8vo. 37 pp., I. plate. 1863.
- RATHBUN, Richard. On the Devonian Brachiopoda of Ereré, Province of Perá, Brazil. 8vo. 3 pp. Buffalo, 1874.
- RAUCH, John H. Public Parks: their effects upon the Moral, Physical and Sanitary Condition of the Inhabitants of Large Cities; with special reference to the City of Chicago. Vol. XIX., Pamphlets. Octavo series. 8vo. 101 pp.. Chicago, 1869.
- RAVON et Malpeyre. Petit Manuel der Negociant d'Eau-de Vie, Liquoriste, Marchand-de-Vin et Distillateur. 32mo. 70 pp. Paris.
- RAYMOND, Rossiter W. See Reports of the Special Commissioners on the Mineral Resources of the United States West of the Rocky Mountains.
- REBHANN, Georg. Theorie der Holz-und Eisen-Construction mit besonderer Rücksicht auf das Bauwesen. 8vo. 602 pp. Vienna, 1856.
- REDFIELD, J. F. Catalogue of the Known Species, Recent and Fossil, of the Family Marginellidæ. Vol. XXIII., Pamphlets. Octavo series. 8vo. 54 pp.
- REDTENBACHER, Jacob Ferdinand. Principien der Mechanik und des Maschinen-baues. 8vo. 317 pp. Manheim, 1859.
- Theorie und Bau der Turbinen. 4to. 183 pp., XXI. plates. Manheim, 1860.
- Theorie und Bau der Wasser-Räder. 4to. 264 pp. Manheim, 1858.
- REED, William. The History of Sugar and Sugar Yielding Plants. 12mo. 206 pp. London, 1866.
- REGENTS' Report of the University of the State of New-York. See *under Journals*.
- REGNAULT, J. Manuel des Aspirants au grade d'Ingenieur des Ponts et Chaussées. 2 vols. in 1. 8vo. 491 pp., LVI. plates. Paris, 1856.
- Henri Victor. An Elementary Treatise on Crystallography. 8vo. 70 pp. London, 1848.

- REGNAULT, Henri Victor. Cours Élémentaire de Chimie. Third edition. 4 vols. in 1. 8vo. Paris, 1851.
- See, also, Strecker, Adolph.
- and Strecker, Adolph. Lehrbuch der Chemie. 12mo. 432 pp. Brunswick, 1866.
- REICH, Edward. Medicinische Chemie. 2 vols. 8vo. Erlangen, 1858.
- REICHARDT, Edward. Die Chemischen Verbindungen der anorganischen Chemie. 8vo. 325 pp. Erlangen, 1858.
- REICHENECKER, Albert. Aufbereitung der geschwefelten Golderze in den Rocky-Mountains im Colorado Territorium der Vereinigten Staaten. Vol. II., Pamphlets. Duodecimo series. 12mo. 80 pp., II. plates. Prag, 1871.
- REID, D. B. Elements of Chemistry, Theoretical and Practical. Third edition. 8vo. 905 pp. Edinburgh, 1839.
- Henry. A Practical Treatise on Concrete. 8vo. 108 pp. London, 1869.
- A Practical Treatise on the Manufacture of Portland Cement, with a translation of M. A. Zipowitz's work on Portland Cement, by W. F. Reid. 8vo. 188 pp. London, 1868.
- W. F. See Reid, Henry.
- REIMANN, M. Aniline and its Derivatives. 8vo. 164 pp. London, 1868.
- REINWALD, Ch. Catalogue Annuel de la Librairie Française, for the years 1858 to 1867 and 1869. 11 vols. 12mo. Paris.
- Ueber die Steinsalzablagerung bei Stassfurt und die dortige Kali-Industrie. Vol. XXIV., Pamphlets. Octavo series. 8vo. 43 pp. Dresden, 1871.
- RENWICK, James. Outlines of Natural Philosophy; being the Heads of a Course of Lectures delivered in Columbia College, New-York. 2 vols. in 1. 8vo. New-York, 1822.
- Treatise on the Steam Engine, with a New Theory of the Steam Engine by C. G. De Pambour. 8vo. 327 pp. New-York, 1848.
- REPERTORIUM Commentationum. See I. D. Reuss.
- der Technischen Literatur. Vol. I. Embracing to years 1823 to 1853. Edited by Dr. Schubarth, Berlin. 1049 pp. 1856.
- Vol. II. Embracing to years 1854 to 1868. Part 2. Edited by Bruno Kerl. 656 pp. Leipsig, 1873.
- der technischen, Mathematischen und naturwissenschaftlichen Journal Literatur. See under Journals.
- REPORT of Commissioners relative to Encroachments and Preservation of the Harbor of New-York. Transmitted to the Legislature January 8, 1856. 8vo. 316 pp., VII. diagrams. New-York, 1864.
- of the Analysis of the Waters of Chechunk Spring, in the Town of Goshen. Vol. XXVII., Pamphlets. Octavo series. 8vo. 24 pp. Goshen, 1820.

- REPORT of the Board of Commissioners of the Irrigation of the San Joaquin, Tulare and Sacramento Valley of the State of California. Lieut. Col. B. S. Alexander, Major George H. Mendell and Prof. George Davison, Commissioners.
8vo. Six maps. Washington, 1874.
- of the British Association for the Advancement of Science.
See under Journals.
- of the Chief of Engineers, Washington. *See, under Journals, Annual Reports.*
- of the Commissioner of Internal Revenue, Washington. } *See under Journals.*
- of the Commissioner of Education, Washington. }
- of the Commissioners of the Land Office, Washington. }
- of the Legislative Committee of the Commonwealth of Massachusetts on Pleuro-Pneumonia. 8vo. Boston.
- of the National Academy of Sciences, Washington. *See under Journals.*
- of the Sanitary Commission dispatched to the Seat of War in the East in 1855, 1856. 8vo. 301 pp. London, 1857.
- on Inter-Oceanic Canals and Rail-Roads between the Waters of the Atlantic and Pacific.
8vo. 28 pp. Washington, 1866.
- REPORTS of the Military Commission to Europe in 1855 and 1856.
Mordecai, Major Alfred. General Report. 176 pp., XXI. plates.
- Schon, J. A Brief Description of the Modern System of Small Arms, as adopted in the various European Armies. Translated from the German by J. Gorgas. 56 pp., XIII. plates. 4to. Washington, 1861.
- of the Inspectors of Coal Mines to Her Majesty's Secretary of State, 1856, 1858. 2 vols. 4to. London.
- of the Special Commissioners on the Mineral Resources of the United States West of the Rocky Mountains.
Browne, J. Ross. Special Commissioner, 1867, 1868.
Introductory and Preliminary Reports.
Appendix to above. Taylor, James W. Report on the Gold Mines of the United States East of the Rocky Mountains. 8vo. 360 pp. Washington, 1867.
- on California, Utah, Montana, Idaho, Washington Territory, Oregon and Alaska.
8vo. 674 pp. Washington, 1869.
Appendix to above. Report on the States and Territories East of the Rocky Mountains. 71 pp.
- Raymond, Rossiter W. Special Commissioner, 1869—. Notes on California, Nevada, Montana, Idaho, &c.
8vo. 256 pp. Washington, 1869.
- for 1870. Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains.
8vo. 805 pp. Washington, 1870.

- REPORTS on the Geological Survey of the State of Missouri.
 Raphael Pumpelly, Director.
- Vol. I. Unpublished Material of Previous Surveys, 1855-1871. Collected by G. C. Broadhead, F. B. Meeks and B. F. Shumard. 8vo. 323 pp. Jefferson City, 1873.
- Vol. II. Survey of 1872. Report on the Iron Ores and Coal Fields by R. Pumpelly, Adolph Schmidt and others. 8vo. 441 pp.; Atlas, IX. plates. New-York, 1873.
- of Societies, &c. }
 REUSS, I. D. Repertorium Commentationum. }
 REVUE de Geologie. } *See under*
 —— des Cours Scientifiques. } *Journals.*
 —— Hebdomadaire de Chimie.
 —— Scientifique. (Revue des Cours Scientifiques.)
 —— Universelle des Mines, de la Metallurgie.
- RIBEYRE, Felix. *See* Exposition du Havre.
- RICHARDSON, Thomas. *See* Ronalds, Richardson and Watts.
- W. The Chemical Principles of the Metallic Arts. 8vo. 303 pp. Birmingham, 1790.
- RICHTER, R. Beitrag sur Paleontologie des Thuringer Waldes. 4to. Dresden, 1849.
- RIEDEL, Jakob. Grundzüge der Mineralogie. 8vo. 194 pp. Heidelberg, 1871.
- RITT, G. Problèmes D'Algèbre. Fourth edition. 8vo. 396 pp. Paris, 1856.
- Problèmes D'Application de L'Algèbre à la Géométrie. Fourth edition. 8vo. Paris, 1857.
- Problèmes de Géométrie. Fourth edition. 8vo. 332 pp. Paris, 1857.
- RITTENGER, P. Ritter von. Erfahrungen im berg-und hüttenmannischen maschinen,—bau-und aufbereitungswesen. Gratisbeilage Zum Oestterreichische Zeitschrift für Berg und Hüttenwesen auf 1872. 4to. 31 pp., XVI. plates. Vienna, 1872.
- Taschenbuch der Aufbereitungskunde. 12mo. 95 pp. Berlin, 1867.
- *See, also, under* Exposition Universelle de Paris, en 1867.
- RITTER, August. Lehrbuch der technischen Mechanik. 8vo. 721 pp. Hanover, 1865.
- Ferdinand. Anleitung mächtige Kohlenflötze. 8vo. 95 pp. Brunn, 1868.
- RIVANCOURT, — de. Éléments de Chimie Docimastique. 8vo. 317 pp. Paris, 1786.
- RIVIÈRE, A. Précis de Mineralogie. 8vo. 408 pp. Paris, 1864.
- RIVOT, E. L. Handbuch der theoretisch-practischen Hüttenkunde. Translated by Carl Hartmann. Vol. 1. Die Kupperhüttenkunde. 12mo. 459 pp. Leipsig, 1860.
- Docimasie. Traité d'Analyse des Substances Minérales. 4 vols. 8vo. Paris, 1864-1866.
- Principes généraux du traitement des Minerais Métalliques. 2 vols. 8vo. Paris, 1869.

- ROBIN, Ch. *Traité du Microscope.* 8vo. 1028 pp. Paris, 1871.
- ROBINSON, S. *A Catalogue of American Minerals, with their Localities.* 8vo. 316 pp. Boston, 1825.
- ROCKWELL, J. A. *Report on Rail-Road and Canal Routes.* 8vo. 678 pp. Washington, 1850.
- RODMAN, T. J. *Reports of Experiments on the Properties of Metals for Cannon, and the Qualities of Cannon Powder; with an Account of the Fabrication and Trial of a 15 inch Gun.* 4to. 308 pp., XXI. plates. Boston, 1861.
- RODWELL, G. F. *A Dictionary of Science.* 8vo. 580 pp. London, 1871.
- ROEHL, E. von. *Fossile Flora der Steinkohlen-Formation Westphaliens.* 4to. 191 pp., XXXII. plates. Cassel, 1868.
- ROEMER, Ferd. *Geognostische Karte von Ober-Schlesien und den Angrenzenden Gebieten. Sectionen Brieg, Creutzberg, Gleiwitz, Guttentag, Königshütte, Leobschutz, Loslau, Namslau, Pless-Troppan, Woischnick.* 12 Charts.
- ROGERS, H. D. *Description of the Geology of the State of New-Jersey, being a Final Report.* 8vo. 301 pp. Philadelphia, 1840.
- *Second, Third, Fourth, Fifth and Sixth Annual Reports of the State Geologist of the State of Pennsylvania.* 8vo. Harrisburg, 1838–1842.
- *The Geology of Pennsylvania.* 2 vols. 4to. 586, 1045 pp. Philadelphia, 1858.
- S. B. *An Elementary Treatise on Iron Metallurgy.* 8vo. 528 pp., XX. plates. London, 1857.
- ROGUET, Ch. *Leçons de Géométrie Analytique.* 12mo. 479 pp. Paris, 1854.
- ROMANOWSKY. *Un Aperçu des travaux géognostiques faites dans le bassin moyen des couches Carbonifères de Russie.* 8vo. 18 pp. St. Petersburg, 1863.
- RONALDS, Edmund; Richardson, Thomas; and Watts, Henry. *Chemical Technology; or, Chemistry in its Applications to the Arts and Manufactures; with which is incorporated a revision of Dr. F. Knapp's "Technology."* Second edition. Vol. I. Part 2. *Fuel, Destructive Distillation and Artificial Illumination.* 836 pp. 1855.
- Part 3. *Acids, Alkalies, Salt, Soaps, &c.* 771 pp. 1863.
- Part 4. *Aluminum, Sodium, Soda, Phosphorus, Matches, Borax, Artificial Mineral Waters, Gunpowder, Gun Cotton, Fireworks, &c.* 611 pp. 1865.
- Part 5. *Prussiate of Potash, Oxalic, Tartaric and Citric Acids. Appendix.—Patents, &c.* 894 pp. 1867.
- Vol. II. *Glass, Alum, Potteries, Cements, Gypsum, &c.* 491 pp. 1848.
- Vol. III. *Food.* 458 pp. 1851.
- 7 vols. 8vo. London, 1867.
- RONGÉ, O. *De la Fabrication de la Tôle en Belgique.* 8vo. 88 pp., III. plates, Paris, 1863.
- ROOD, Ogden N. *An Abstract of Prof. Kobell's Stauroscopic Observations.* Vol. V., Pamphlets. Octavo series. 8vo. 8 pp. 1859.

- Roon, Ogden N. On Certain Adaptations of the Compound Microscope. Vol. V., Pamphlets. Octavo series. 8vo. 3 pp. 1856.
- On the Action of Very Weak Electric Light on the Iodized plate. Vol. V., Pamphlets. Octavo series. 8vo. 3 pp. 1864.
- On the Green Tint from mixing Blue and Yellow Powders. Vol. V., Pamphlets. Octavo series. 8vo. 2 pp. 1866.
- On the Nature and Duration of the Discharge of a Leyden Jar connected with an Induction Coil. Vol. V., Pamphlets. Octavo series. 8vo. 10 pp. 1867.
- On the Production of Thermo-Electric Currents by Percussion. Vol. V., Pamphlets. Octavo series. 8vo. 8 pp. 1866.
- On the Study of the Electric Spark by the Aid of Photography. Vol. V., Pamphlets. Octavo series. 8vo. 8 pp. 1862.
- Photometric Experiments. *Part Second.* On the amount of Light transmitted by Plates of Polished Crown Glass at a Perpendicular Incidence. Vol. V., Pamphlets. Octavo series. 8vo. 10 pp. 1870.
- Upon Some Experiments connected with Dove's Theory of Lustre. Vol. V., Pamphlets. Octavo series. 8vo. 7 pp. 1861.
- Root, P. H. and F. M. Illustrated Catalogue of Force Blast Blowers, Portable Forges, Cupolas and Gas Exhausters. 4to. 32 pp. Connorsville, Ind., 1874.
- Roscoe, Henry E. *Léçons in Elementary Chemistry.* 12mo. 458 pp. London, 1869.
- The same as above. New American edition. 16mo. 383 pp. New-York, 1870.
- Spectrum Analysis. Six Lectures delivered in 1868, before the Society of Apothecaries of London. 8vo. 348 pp. London, 1869.
- ROSE Gustav. Beschreibung einiger neuen Mineralien vom Urals. Vol. X., Pamphlets. Octavo series. 8vo. 22 pp.
- Das Krystallo-Chemische Mineralsystem. 8vo. 156 pp. Leipsig, 1852.
- Die Heteromorphen Zustände der Kohlensäuren Kalkerde. Vol. X., Pamphlets. Octavo series. 8vo. 14 pp. Berlin, 1860.
- Die Identität des Edwardsit u. Monagit. Vol. X., Pamphlets. Octavo series. 8vo. 7 pp., I. plate.
- Elemente der Krystallographie. Second edition. 8vo. 173 pp., X. plates. Berlin, 1838.
- The same as above. Third edition. Edited by Sadebeck, Alexander. 8vo. 181 pp. Berlin, 1873.
- Mineralogisch-Geognostische Reise nach dem Ural, dem Altai und dem Kierpathische Meere. 2 vols. 8vo. Berlin, 1837-1842.
- Ueber Schaumkalk als Pseudomorphose von Aragonit. Vol. X., Pamphlets. Octavo series. 8vo. 12 pp., I. plate. 1855.
- Heinrich. Ausführliches Handbuch der Analytischen Chemie Qualitative und Quantitative. 4 vols. 8vo. Brunswick, 1851.
- Handbuch der Analytischen Chemie. Sixth edition. Vol. I. Qualitative Analyse. Vol. II. Quantitative Analyse. 2 vols. 8vo. Leipsig, 1867.

- ROSE, Heinrich. *Traité Complet de Chimie Analytique Qualitativ et Quantitativ.* 2 vols. 8vo. Paris, 1859, 1862.
- *Traité Pratique d'Analyse Chimique. Traduit de l'Allemand par A. J. L. Jourdan.* 2 vols. 8vo. Paris, 1843.
- ROSENBERG, J. O. *Om Vitroafveljern föreningarne.* 4to. 28 pp.
- ROSS, Andrew. *The Article "Microscope."* (*From the Penny Cyclopaedia.*) Vol. X., Pamphlets. Quarto series. 4to. 12 pp.
- ROSSMÄSSLER, E. A. *Das Wasser. Eine Darstellung für gebildete Leser und Leserinnen.* 8vo. 528 pp. Leipzig, 1858.
- ROST, G. H. A. *Bohrhäuser der Saline Circhocinek in Polen.* 8vo. 192 pp., VIII. plates. Thorn, 1843.
- ROTH, Justus. *Beiträge zur Petrographie der plutonischen Gesteine.* 4to. 144 pp. Berlin, 1869.
- *Die Gestein Analysen in Tabellarischen Übersicht und mit Kritischen Erläuterungen.* Vol. IX., Pamphlets. Quarto series. 4to. 68 pp. Berlin, 1861.
- *Ueber die Lehre vom Metamorphismus und die Entstehung der Krystallinischen Schiefer.* Vol. IX., Pamphlets. Quarto series. 4to. 84 pp. Berlin, 1871.
- ROTHROCK, J. T. *See under Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian.*
- ROWLAND, Thomas F. *Improvement in Machinery for Elevating and Transporting Coal, Coke or other Material, and for the Charging and Discharging of Gas Retorts, as applied to the Manufacture of Illuminating Gas.* 4to. 7 pp., VIII. plates. Brooklyn, 1873.
- ROYAL Irish Academy. *See, under Journals, Transactions of the Society's Catalogue (The) of Scientific Papers. (1800–1863.)* Vol. I. A.—Clu. Vol. II. Coa.—Gra. Vol. III. Gre.—Lez. Vol. IV. Lhe.—Poez. Vol. V. Pra.—Tiz. Vol. VI. Tka.—Zyl. 6 vols. 4to. London, 1867–1872.
- RUDOLPH, A. *Die Edlen Metalle und Schmucksteine.* 8vo. 175 pp. Breslau, 1859.
- RUMPF, von J. *Über Hartit aus der Kohle von Oberdorf und den Angrenzenden Gebieten von Voitsberg und Köflach in Steiermark.* Vol. XI., Pamphlets. Octavo series. 8vo. 10 pp., II. plates. 1869.
- RUSSEGER, Joseph. *Der Aufbereitung-Prozess.* 8vo. 181 pp. text; Atlas, XXIX. plates. Stuttgart, 1841.
- RYCHHALT, *Le Baron P.* *Mélanges Paléontologiques. Part I.* 176 pp., X. plates.
- RZHAIA, Franz. *Lehrbuch der Gesammten Tunnelbunkunst.* Vol. I. 723 pp. 1867. Vol. II. Parts 1, 2, 4. 4to. Berlin, 1872.

S.

- SACHSISCHE Bergwerks Zeitung. *See under Journals.*
- SACKEN, E. F. v. Katechismus der Baustyle.
12mo. 168 pp. Leipsig, 1867.
- SACHS, C. Ueber Gesteinbohrmaschinen.
8vo. 40 pp. Aix la Chapelle, 1865.
- Julius. Lehrbuch der Botanik.
8vo. 632 pp. Leipsig, 1868.
- SADEBECK, Alexander. Gustav Rose's Elemente der Krystallographie. Third edition.
8vo. 181 pp. Berlin, 1873.
- SAFFORD, James M. First and Second Biennial Reports on the Geology of the State of Tennessee, made to the Thirty-first and Thirty-second General Assemblies.
8vo. 164, 11 pp. Nashville, 1856, 1857.
- Geology of Tennessee. 8vo. 550 pp. Nashville, 1869.
- SAGE. Éléments de Mineralogie Docimastique.
12mo. 275 pp. Paris, 1772.
- SALNEUVE, J. F. Cours de Topographie et de Geodäsie.
8vo. 663 pp. Paris, 1857.
- SALT Company of Onondaga. Prospectus.
8vo. 50 pp. Syracuse, N. Y.
- SALVÉTAT, Louis Alphonse. Recueil des Travaux Scientifiques de M. Ébelmen. Précédé d'une notice sur M. Ébelmen par E. Chevreuil.
2 vols. 8vo. Paris, 1855.
- SAN Buenaventura Pacific Petroleum Co. of New-York. A Brief Account of One Hundred Thousand Acres of Oil Lands in California. Vol. XXIV., Pamphlets. Octavo series.
8vo. 24 pp. New-York, 1865.
- SANDBERGER, Fridolin. Die Land-und Süßwasser-Conchylien der Vorwelt.
Lieferungs I. to X., text and plates. 4to. Wiesbaden, 1870-1873.
- Untersuchungen über das Mainzer Tertiärbecken und dessen Stellung im Geologischen systeme. Vol. XXI., Pamphlets. Octavo series.
8vo. 91 pp. Wiesbaden, 1853.
- Guido. Einige Beobachtungen über Clymenien; mit besonderer Rücksicht auf die Westphälischen Arten. Vol. XXIII., Pamphlets. Octavo series.
8vo. 45 pp., III. plates. 1853.
- SARTORIUS, v. Waltershausen, W. Ueber die Vulkanischen Gesteine in Sicilien und Island und ihre submarine Anbildung.
8vo. 532 pp. Gottingen, 1853.
- SAUNDERS. System of Instruction in the Practical use of the Blowpipe.
12mo. 269 pp. New-York, 1858.
- SAWKINS, J. G. Reports on the Geological Survey of Jamaica.
8vo. 339 pp. London, 1869.
- SAY, Thomas. A Description of the Insects of North America. Edited by J. L. Le Conte, with a Memoir of the Author by George Ord.
2 vols. 8vo. New-York, 1869.

- SCHARF, F. Über den Gypspath.
4to. 39 pp. Frankfort on the Main, 1871.
- SCHEELE, C. W. Chemical Essays. 8vo. 406 pp. London, 1786.
- SCHEERER, Theodor. Lehrbuch der Metallurgie. Vol. I. and part of Vol. II. bound in one vol. 594, 194 pp. Brunswick, 1857.
- Löthrohrbuch. 12mo. 293 pp. Brunswick, 1857.
- SCHEFFLER, Hermann. Theorie der Gewölbe, Futtermanern und Eisernen Brucken. 8vo. 138 pp. Brunswick, 1857.
- SCHELLEN, H. Die Spectralanalyse in ihrer Anwendung auf die Stoffe der Erde und die Natur der Himmelskörper.
8vo. 452 pp. Brunswick, 1870.
- Spectrum Analysis in its applications to Terrestrial Substances, and the physical constitution of the Heavenly Bodies. Translated by Jane and Caroline Lassell.
8vo. 455 pp. New-York, 1872.
- SCHICK, E. Katechismus der Waarenkunde.
12mo. 360 pp. Leipsig, 1871.
- SCHICKH, Melchior E. v. Anleitung zur zweckmässigsten Bereinigung der Semring-Eisenbahn von Gloggnitz bis Mürzzuschlag. Vol. VI., Pamphlets. Octavo series.
12mo. 14 pp., I. plate. Vienna, 1851.
- SCHILLING, N. H. Statistische Mittheilungen über die Gas-Anstalten Deutschlands, &c. 8vo. 372 pp. Munich, 1868.
- SCHINZ, C. Die Wärme Messkunst.
2 vols. 8vo. text, 4to. plates. Stuttgart, 1859.
- Dokumente Betreffend den Hohofen.
8vo. 131 pp. Berlin, 1868.
- Documents concernants le Haute-Fourneau. Traduits par E. Fievet. 8vo. 128 pp. Paris, 1868.
- SCHLEIDEN, M. J. Die Pflanze und ihr Leben.
8vo. 378 pp. Leipsig, 1855.
- SCHLICKEYSEN, S. Mittheilungen über die Fabrication von Press-Torf. 8vo. 20 pp. Berlin, 1864.
- SCHLOMILCH, Oskar. Grundzüge einer Wissenschaftlichen Darstellung der Geometrie des Maasses.
8vo. 256 pp. Eisenach, 1854.
- SCHMERLING, P. C. Recherches sur les Ossemens Fossiles.
2 vols. 4to. text; 2 vols. 2to. plates. Liege, 1833-1836.
- SCHMIDT, Adolph. See Pumpelly, Raphael.
- Carl Heinrich. Die neuesten wichtigsten Fortschritte, Erfindungen und Verbesserungen in der Farbenfabrikation.
16mo. 240 pp., IV. plates. Weimar, 1869.
- Technologisches Skizzenbuch.
4to. LIV. plates. Stuttgart, 1865.
- J. C. E. Lehrbuch der mathematischen und physikalischen Geographie. 2 vols. 12mo. Gottingen, 1829, 1830.
- SCHNAUS, J. Katechismus der Photographie.
12mo. 148 pp. Leipsig, 1864.
- SCHNEIDER, W. Taschenbuch, für practische Bergwerke und Bergwerks unternehmer. 12mo. 206 pp. Neuweid, 1857.

- SCHNEITLER, C. F. Die Instrumente und Werkzeuge der höheren und niederen Messkunst. 8vo. 393 pp. Leipsig, 1861.
 ——— Lehrbuch der gesammten Messkunst. 8vo. 374 pp. Leipsig, 1851.
- SCHÖDEL, II. Hülfsstafel zur barometrischen Höhenbestimmung nebst Anleitung zur Untersuchung und zum Gebrauch der Federbarometer. Zweite verbesserte Auflage. 8vo. Stuttgart, 1874.
- SCHÖDL, Franz. Handbuch ausführliche metrischen Tabellen. 8vo. 108 pp. Vienna, 1870.
- SCHOEDLER Friederich. Das Buch der Natur, die Lehren der Physik, Astronomie, Chemie, Mineralogie, Geologie, Botanik, Zoologie und Physiologie. 8vo. 614 pp. Brunswick, 1874.
 ——— Die Chemie der Gegenwart. 8vo. 452 pp. Leipsig, 1859.
- SCHOEN, J. G. Der Tunnel-Bau. 4to. 48 pp., XIV. plates. Vienna, 1866.
- SCHOLL, E. F. Führer des Machinisten. 8vo. 656 pp. Brunswick, 1873.
- SCHOMBURGK, O. A. R. H. Schomburgk's Reisen in Guiana und am Orinoco. 8vo. 510 pp. Leipsig, 1841.
- SCHÖN, J. See Reports of the Military Commission to Europe in 1855 and 1856.
- SCHÖNFELDER. See, *under Journals, Die Baulichen Anlage auf den Berg-Hütten und Salinenwesens in Preussen.*
- SCHOOLCRAFT, H. R. The Lead Mines of Missouri, including Observations on the Geology, &c., of Missouri and Arkansas. 8vo. 299 pp. New-York, 1819.
- SCHOTT, Arthur. See United States and Mexican Boundary Survey. Part I.
 ——— C. A. See United States Coast Survey Reports.
- SCHOTTE, F. See Repertorium der technischen, Mathematischen und naturwissenschaftlichen Journal-Literatur.
- SCHOTTER, Hermann. Über die Rationelle Benutzung der Wasserkräfte mittelst eines neuen apparatus zur transmission derselben. Vol. IV., Pamphlets. Octavo series. 8vo. 28 pp., I. plate. Gera, 1873.
- SCHRAUF, Albrecht. Handbuch der Edelsteinkunde. 8vo. 252 pp. Vienna, 1869.
 ——— Lehrbuch der Krystallographie und Mineral-Morphologie und Lehrbuch der Angewandten Physik der Krystalle. 2 vols. in 1. 8vo. Vienna, 1866-1868.
 ——— Monographie des Columbit. Vol. XV., Pamphlets. Octavo series. 8vo. 19 pp., VII. plates. Vienna, 1861.
 ——— Studien an der Mineralspecies: Labradorit. Vol. XI., Pamphlets. Octavo series. 8vo. 58 pp., V. plates, 1869.
- SCHRÖN, Ludwig. Seven figure Logarithms. Fifth edition, with a description of the tables added by A. De Morgan. 8vo. 550 pp. London, 1865.
- SCHUBARTH, —. See Repertorium der Technischen Literatur.
- SCHULLER, Siegmund. Die Schule des Feuerlochwesens. 24mo. 221 pp. Leipsig, 1865.

SCHULTZ, Fleeth T. Der rationelle Ackerbau in seiner Begründung durch Ergebnisse der neueren Naturforschung.

8vo. 455 pp. Berlin, 1856.

——— Carl. Mineral-Spring Waters.

8vo. 70 pp. New-York, 1865.

SCHULZE, E. H. C. Sammlung des Wasserbaugesetze für das Königreich Hanover vom Jahre 162 bis Ende 1858.

12mo. 355 pp., IV. plates. Esslingen, 1857.

SCHUMARD, B. F. See Pumpelly, Raphael.

SCHUTZENBERGER, P. Die Farbestoffe mit besonderer Berücksichtigung ihre Anwendung in der Färberei und Druckerei. Autorisirte deutsche Uebersetzung bearbeitet von Dr. Hermann Schröder.

2 vols. 8vo. Berlin, 1873.

Vol. I. 543 pp., XII. wood cuts, I. plate and X. *pattern plates*. 1868.

Vol. II. 623 pp., XXXVIII. *pattern plates*.

SCHWEIGER's Journal für Chemie und Physik. See, under *Journals*, Journal für Physik.

SCHWEITZER, Paul. Contributions from the Laboratory of the State University of the State of Missouri;

A. On the True Composition of Coal, and on the Methods of Arriving at it; with Deductions and Remarks on Coal in General; illustrated on a Sample of Coal from the Lower Coal Series of Missouri.

B. The Water Supply of Columbia, Boone County, Missouri; being an Exposition of the Origin of the Springs and Subterranean Water Courses of the Town and Neighborhood, with some Analyses of Cistern Water.

8vo. 38 pp. Jefferson City, 1875.

——— On Tribasic Phosphoric Acid.

8vo. 41 pp. New-York, 1869.

SCIENTIFIC American. See under *Journals*.

SCILLA, A. E. De Corporibus Marinis.

4to. 84 pp. Rome, 1752.

SCOFFERN, J., Oxland, Robert, and others. The Useful Metals and their Alloys.

8vo. 654 pp. London, 1857.

SCRIVENOR, Henry. History of the Iron Trade from the Earliest Records to the Present Period.

8vo. 327 pp. London, 1854.

SCUDDER, S. H. Catalogue of North American *Orthoptera*, described previous to 1867. *Smith. Misc. Coll.*

8vo. 89 pp. Washington, 1868.

SEBILLOTTE, L. A. Bassins de Radoub de Marseille. Notice sur L'Exécution des Travaux.

4to. 204 pp.; Atlas, 2to., XL. plates. Marseilles, 1873.

SECKENDORFF, W. Über die beim Gebirgsbohren angewendets Meissel.

8vo. 46 pp. Berlin, 1862.

SELLERS, George Escol. Improvement in Locomotive Engines and Rail-Roads.

4to. Cincinnati, 1849.

——— John. The Color Mixer.

12mo. 155 pp. Philadelphia, 1865.

- SELLA, O. Quadro-delle Forme Cristalline dell'Argento Rosso, del Quarzo e del Calcare. Vol. II., Pamphlets. Duodecimo series. 12mo. 74 pp. Torino, 1856.
- SELWYN, A. R. C. *See* Geological Survey of Canada.
- SENAMON, H. de. *See* Miller, W. A.
- SENF, Ferdinand. Die Krystallinischen Felsmengentheile nach ihren Mineralischen Eigenschaften, chemischen Bestandtheilen, Abarten, Umwandlungen, Associationen und Felsbildungsweisen. 8vo. 749 pp. Berlin, 1868.
- SERLO, A., and Stolzel, C. Bergbau und Hüttenwesen. 8vo. 104 pp. Brunswick, 1874.
- *See* Lottner, A.
- SERRET, J. A. Traité D'Arithmetique. 8vo. 408 pp. Paris, 1852.
- Traité de Trigonometrie. 8vo. 116 pp. Paris, 1852.
- SHARPE, D. Fossiles du Portugal. Vol. XXII., Pamphlets. Octavo series. 8vo., X. plates, 1850.
- The Secondary Rocks and Fossils of Portugal. Vol. XXII., Pamphlets. Octavo series. 8vo. 100 pp., VI. plates. London, 1849, 1850.
- SHARPLES, S. P. Chemical Tables. 12mo. 192 pp. Cambridge, 1866.
- SHEFFIELD Scientific School of Yale College—Aim and Objects of Scientific Education as provided in the. Vol. I., Pamphlets. Duodecimo series. 12mo. 24 pp. New Haven, 1869.
- Scientific School (The) of Yale College, briefly described. Vol. I., Pamphlets. Duodecimo series. 12mo. 12 pp. New-Haven, 1870.
- SHERMAN, W. H. Vermilion by a New Process—Its Photographic Properties. 2 pp. 1872.
- *See* under Tech.
- SHREVE, Samuel H. A Treatise on the Strength of Bridges and Roofs, with practical applications for the use of Engineers and Students. 8vo. 346 pp. New-York, 1873.
- SIEMENS, C. W. A Lecture on Fuel. Vol. VII., Pamphlets. Octavo series. 8vo. 31 pp. London, 1873.
- Description of his Patent Continuous Glass Melting Furnace. Vol. VII., Pamphlets. Octavo series. 8vo. 4 pp., I. plate. London, 1873.
- Description of his Patent Regenerative Gas Furnaces. Vol. VII., Pamphlets. Octavo series. 8vo. 19 pp., IV. plates. London, 1868.
- On Puddling Iron. A Paper read before the British Association at Norwich, 1868. Vol. VII., Pamphlets. Octavo series. 8vo. 29 pp. London, 1871.
- Über Brennstoff—Ueber Gewinnung von Eisen und Stahl durch direktes Verfahren. 8vo. 70 pp., II. plates. Berlin, 1874.
- SILLIMAN, Benjamin. American Contributions to Chemistry. An Address delivered on the occasion of the Celebration of the Centennial of Chemistry, at Northumberland, Pa., August 1, 1874. 8vo. 173 pp. Philadelphia, 1874.

- SILLIMAN, Benjamin. Elements of Chemistry.
2 vols. 8vo. New-Haven, 1830, 1831.
- Benjamin, Jr. Description and Analysis of Several Minerals. Vol. XII., Pamphlets. Octavo series. 8vo. 18 pp. 1849.
- First Principles of Physics, or Natural Philosophy.
12mo. 720 pp. Philadelphia, 1859.
- Report upon the Oil Property of the Pacific Coast Petroleum Company. Vol. XXXII., Pamphlets. Octavo series.
8vo. 24 pp. New-York, 1865.
- Report upon the Oil Property of the Philadelphia and California Petroleum Company, situated in Santa Barbara and Los Angeles Counties, California. Vol. XXXII., Pamphlets. Octavo series.
8vo. 36 pp. Philadelphia, 1865.
- See White, J. H.
- SILLIMAN'S Journal. See, under Journals, American Journal of Science and Art.
- SILVER Mines (The) of Nevada. Vol. II., Pamphlets. Octavo series.
8vo. 76 pp., I. map. New-York, 1864.
- SILVERSMITH, J. A Practical Hand-Book for Miners, Metallurgists and Assayers. 8vo. 271 pp. New-York, 1866.
- SIMONIN, L. Les Pierres Esquisses Mineralogiques.
8vo. 516 pp. Paris, 1869.
- SITZUNGSBERICHTE der Kaiserlichen Akademie der Wissenschaften. }
—— der mathematisch-physikalischen Classe der } See under
Königlich Bayerischen Akademie der Wi- } Journals.
senschaften. }
- SKALKOOSKY, C. Tableaux Statistiques de L'Industrie des Mines en Russie en 1871. 8vo. St. Petersburg, 1873.
- SLATER, J. W. Handbook of Chemical Analysis for Practical Men. Second edition. 12mo. 384 pp. London, 1861.
- The Manual of Colors and Dye Wares.
12mo. 217 pp. London, 1870.
- SMITH, H. L. On the Preparation of Diatomæ. 8vo. 4 pp. 1874.
- J. C. The Effect of the Nitrous Vapor, in Preventing and Destroying Contagion. 8vo. 174 pp. Philadelphia, 1799.
- J. Lawrence. A Description of Five New Meteoric Irons, with some Theoretical Considerations based on their Physical and Chemical Characters. Vol. V., Pamphlets. Octavo series.
8vo. 33 pp. New-Haven, 1855.
- On some of the Thermal Waters of Asia Minor. Vol. XXIX., Pamphlets. Octavo series.
8vo. 20 pp. 1851.
- On the Minerals of the Wheatly Mine, in Pennsylvania. Vol. XII., Pamphlets. Octavo series. 8vo. 14 pp. New-Haven, 1855.
- Re-examination of American Minerals. Part 4. Vol. XII., Pamphlets. Octavo series.
8vo. 11 pp. 1854.
- Report on the Minerals and Mineral Waters of Chili. Vol. IX., Pamphlets. Octavo series.
4to. 25 pp.
- Scientific Researches. 8vo. 401 pp. Louisville, Ky., 1873.
- See under Exposition Universelle de Paris, en 1867.

- SMITH, J. Lawrence, and Brush, George J. Re-examination of American Minerals. Part 1. Vol. XII., Pamphlets. Octavo series. 8vo. 9 pp. 1853.
- Robert Angus. Air and Rain. 8vo. 600 pp. London, 1872.
- SMITHSONIAN Institute Publications.
- Annual Reports of the Regents of the Smithsonian Institution. *See under Journals.*
- Catalogue of the Publications of Societies and of Periodical Works in the Library of the Smithsonian Institution, July 1, 1858. Foreign Works. *Smith. Misc. Coll.* 8vo. 259 pp. Washington, 1859.
- Catalogue of the Publications of Societies and of Periodical Works in the Library of the Smithsonian Institution, January 1, 1866. *Smith. Misc. Coll.* 8vo. 591 pp. Washington, 1866.
- The same as above. Corrected to January 1, 1866.
- Catalogue of the Publications of the Smithsonian Institution corrected to June, 1862. *Smith. Misc. Coll.* 8vo. 44 pp. Washington, 1862.
- Check List of the Publications of the Smithsonian Institution corrected to July, 1872. *Smith. Misc. Coll.* 8vo. 20 pp. Washington, 1872.
- Circular Relative to Heights. 8vo. Washington, 1874.
- Directions for Constructing Lightning Rods. 8vo. 4 pp. Washington, 1874.
- Directions for Meteorological Observations and the Registry of Periodical Phenomena. *Smith. Misc. Coll.* 8vo. 70 pp. Washington, 1860.
- Instructions for Observations of Thunder Storms. A circular. Washington, 1874.
- List of the Foreign Correspondents of the Smithsonian Institution corrected to January, 1862. *Smith. Misc. Collec.* 8vo. 20 pp. Washington, 1862.
- The same as above. Corrected to January, 1872. *Smith. Misc. Coll.* 8vo. 36 pp. Washington, 1872.
- List of the Institutions, Libraries, Colleges and other establishments in the United States in Correspondence with the Smithsonian Institution. *Smith. Misc. Coll.* 8vo. 250 pp. Washington, 1872.
- Queries Relative to the Food of Fishes of the United States. A circular. 8vo. Washington.
- Queries Relative to Tornadoes. A circular. 8vo. Washington.
- Smithsonian Miscellanea. A circular. 8vo. Washington, 1862.
- Smithsonian Miscellaneous Collections. *See under the respective Authors.*
- Telegraphic Announcement of Astronomical Discoveries. *Smith. Misc. Coll.* Circular. 8vo. Washington, 1873.
- SMYTH, R. B. The Gold Fields and Mineral Districts of Victoria. 8vo. 644 pp. Melbourne, 1869.

- SMYTH, W. W. Catalogue of the Mineral Collections in the Museum of Practical Geology. 8vo. 190 pp. London, 1864.
- On the Mines of Wicklow and Wexford. 8vo. 64 pp., II. maps. London, 1853.
- SNELUS, G. J., Lester, John, and Messrs. Taskin et Tahon. Rapports sur Le Puddlage Mécanique par le Procédé Danks. 8vo. 147 pp., I. plate. Brussels, 1873.
- SOCHLING, E. Die Einschlüsse von Mineralien. 8vo. 357 pp. Freiberg, 1860.
- SONDHAUS, C. F. J. De Vi Quam Color Habet in Fluidorum Capillaritatem. 8vo. 41 pp., I. plate. Vratislaviensis.
- SONORA, and the Value of its Mines. Report of the Sonora Exploring and Mining Co. Vol. II., Pamphlets. Octavo series. 8vo. 42 pp. Cincinnati, 1856.
- SOUBEIRAN, J. Léon. Nouveau Dictionnaire des Falsifications et des Alterations des Alimens, des Medicamens et de Quelques Produits Employés dans les Arts, L'Industrie et L'Economie Domestique. 8vo. 634 pp. Paris, 1874.
- SOUTH Staffordshire Coal Field, (The.) *Mem. Geol. Surv. G. B.* 8vo. 241 pp. London, 1859.
- SPARGO, Thomas. The Mines of Cornwall and Devon. Statistics and Observations. 8vo. 188 pp. London, 1865.
- SPARRE, Julius von. Zur Theorie der Separation oder Kritische Bemerkungen zu Von Rittenger's Lehrbuch der Aufbereitungskunde. 8vo. 48 pp. Oberhausen, 1869.
- SPECIFICATIONS for Patents. *See under* British Patent Office.
- SPENCER, W. H. Elements of Qualitative Chemical Analysis. 4to. 94 pp. London, 1866.
- SPIER and Strenne. French and English Pronouncing Dictionary. Revised by G. P. Quackenbos. 8vo. 1315 pp. New-York, 1858.
- SPON'S Dictionary of Engineering. *See* Byrne and Spon.
- SPOTTISWOODE, William. Polarization of Light. 24mo. 129 pp. London, 1874.
- SPRINGER, A. H. Handbuch der Kunstgeschichte. 8vo. 386 pp. Stuttgart, 1855.
- STAATSBUDGET, (Das,) und das Bedürfniss für Kunst und Wissenschaft im Königreich Hannover. 4to. Hanover, 1866.
- STAHL, Leopold. Allgemeiner Gang der Qualitativen Chemischen Analyse. 12mo. 93 pp. Berlin, 1862.
- STAHLSCHMIDT, J. H. Darstellung des Eisen-hochofen-prozesses in zahl und bild. 8vo. 85 pp. Ferndorf, 1854.
- STAMMER, Karl. Chemisches Laboratorium. Anleitung zum Selbstunterricht in der Chemie. 8vo. 609 pp. Giessen, 1856.
- STANLEY, J. M. Portraits of North American Indians. *Smith. Misc. Coll.* 8vo. 76 pp. Washington, 1852.
- STANSBURY, Howard. Exploration and Survey of the Valley of the Great Salt Lake of Utah, including a Reconnoissance of a New Route through the Rocky Mountains. 8vo. 487 pp. Philadelphia, 1852.

- STAPFF, F. M. Ueber Gesteinbohr Maschinen.
4to. 260 pp. text; Atlas, 2to. plates. Stockholm, 1869.
- STATISTICAL ANNUAL. *See under Journals.*
- Sanitary and Medical Reports of the Army for 1859.
8vo. 438 pp. London, 1861.
- STEEDMAN, *Lieut.* *See* Washington Astronomical and Meteorological Observations.
- STEELE, J. D. A Fourteen Weeks' Course in Chemistry.
8vo. 266 pp. New-York, 1869.
- STEGMAYER, Carl. Handbuch der Bergbaukunst für Jedermann.
8vo. 325 pp. Prag, 1862.
- STEINBECK, Georg Victor Albert. Chemisch-Analytische Untersuchungen über die Veränderung, welche der Mansfelder Kupferstein bei seiner Röstung Behufs Entsilberung durch die Ziervogelsche Extractionsmethode. *An Inaugural Dissertation.*
12mo. 56 pp. Halle, 1862.
- STEININGER, Johann. Die erloschenen Vulkane in der Eifel und am Niederrhein.
8vo. 223 pp. Mainz, 1820.
- STEINMAN, Ferdinand. Ergänzungs heft zu dem Compendium der Gasfeuerung.
8vo. 100 pp. Freiberg, 1868.
- The same as above.
8vo. 24 pp. Freiberg, 1869.
- STEPHENS, H. Katechismus des practisches Ackerbaues. Translated by —. Hamm.
12mo. 110 pp. Leipsig, 1857.
- STEPHENSON, R. Report on Atmospheric Pressure.
4to. 44 pp., XXV. plates. London, 1844.
- STEVENS, John. Documents tending to Prove the Superior Advantages of Rail-Ways and Steam Carriages over Canal Navigation; with Preface by Dr. Chas. King. Vol. IV., Pamphlets. Octavo series.
8vo. 46 pp. New-York, 1812. (Rep. 1852.)
- STEWART, F. L. Sorghum and Its Products.
12mo. 240 pp. Philadelphia, 1867.
- William M. Speech on the Bill to Establish a National School of Mines; delivered in the Senate of the United States, January 16, 1868. Vol. III., Pamphlets. Octavo series.
8vo. 16 pp. Washington, 1868.
- STIFFT, C. E. Versuch einer Anleitung zu der Aufbereitung der Erze.
8vo. 231 pp. Cassell, 1818.
- STILLMAN, Paul. The Steam Engine Indicator and the Improved Manometer Steam and Vacuum Gauges.
8vo. 90 pp. New-York, 1864.
- STIMPSON, Wm. Researches upon *Hydrobiine*. *Smith. Misc. Coll.*
8vo. 59 pp. Washington, 1865.
- ST. JOHN, James. A Method of Chemical Nomenclature.
8vo. London, 1788.
- STÖLZEL, C. *See* Serlo, A., and Stölzel, C.
- E. Die Metallurgie im Bolley's Chemischen Technologie.
3 parts. 8vo. Brunswick, 1868.
- STORER, D. H. *See* Dewey, Chester.
- F. H. First Outlines of a Dictionary of Solubilities of Chemical Substances.
8vo. 713 pp. Cambridge, 1864.

- STORER, F. H. *See* Eliot and Storer.
- and Eliot, C. W. On the Chromate of Chromium, and Analogous Chromates. Vol. XXI., Pamphlets. Octavo series. 8vo. 35 pp. 1861.
- STORY Maskelyne, Nevil. A Guide to the Collection of Minerals in the British Museum. Vol. X., Pamphlets. Octavo series. 8vo. 16 pp. London, 1873.
- Catalogue of the Collection of Meteorites exhibited in the Mineral Department of the British Museum. Vol. X., Pamphlets. Octavo series. 8vo. 8 pp. London, 1872.
- STOUT, Peter F. Report upon the Lands of the St. Domingo Mining and Commercial Co. Vol. XXIV., Pamphlets. Octavo series. 8vo. 23 pp. Philadelphia, 1866.
- STRECKER, Adolph. Kurzes Lehrbuch der Anorganischen Chemie theilweise nach Victor Regnault. Seventh edition. 16mo. 432 pp. Brunswick, 1866.
- The same as above. Eighth edition. 12mo. 770 pp. Brunswick, 1869.
- Theorien und Experimente zur Bestimmung der Atomgewichte der Elemente. 8vo. 146 pp. Brunswick, 1859.
- STUART, Robert. A Descriptive History of the Steam Engine. 8vo. 228 pp. London, 1828.
- STUDER, B. Geologie der Schweiz. 2 vols. 12mo. Bern, 1853.
- Geologie der Westlichen Schweizer-Alpen. 8vo. 420 pp. text; 4to. IV. plates. Leipzig, 1834.
- Lehrbuch der physikalischen Geographie und Geologie. 8vo. 526 pp. Bern, 1844.
- STUR, Dionys. Geologie der Steiermark. 8vo. 650 pp. Graz, 1871.
- STYFFE, Knut. Berichte über die neuesten Fortschritte im Eisenhüttenwesen. 8vo. 79 pp., IV. plates. Leipzig, 1868.
- Die Festigkeits Eigenschaften von Eisen und Stahl. 8vo. 176 pp. Weimar, 1870.
- STURM J. K. F. Cours d'Analyse de L'Ecole Polytechnique. 2 vols. in 1. 8vo. 206 pp. Paris, 1852.
- SUE, P. Histoire du Galvanisme; et Analyse des différens ouvrages publiés sur cette découverte, depuis son origine jusqu' à ce jour. 3 vols. 12mo. Paris, 1802.
- SULLIVANT, W., and Wormley, T. On Nobert's Test Plate and the Striæ of Diatoms. Vol. XXVI., Pamphlets. Octavo series. 8vo. 7 pp. 1861.
- SUMMARY of Statistics relating to Mining for 1867. (In Russian.) Published by the Scientific Committee of the Corps of Mining Engineers. 8vo. 363 pp. St. Petersburg, 1867.
- SUMNER, Charles. The Metric System of Weights and Measures. A Speech delivered in the Senate of the United States, July 17, 1866. Vol. I., Pamphlets. Octavo series. 8vo. 7 pp. Boston, 1866.
- SUTTON, Francis. A Systematic Handbook of Volumetric Analysis. 8vo. 377 pp. London, 1871.

- SVANBERG, JONS. Exposition des operations faites en Laponnie pour la Determination d' un Arc du Meridien, en 1801, 1802 et 1803, par Messieurs Överbom, Svanberg, Holmquist et Palander. Redigée par Jons Svanberg.
8vo. 198 pp. Stockholm, 1805.
- SVENSSON, N. Svfelsyrliga salter med Kopparoxidul och silver-oxid. Vol. III., Pamphlets. Quarto series. 4to. 24 pp. 1870.
- SWALLOW, G. C. First and Second Annual Reports of the Geological Survey of Missouri. 8vo. 446 pp. Jefferson City, 1855.
- SWAIN Turbine Water-Wheel, (The.) An Illustrated Description of the Apparatus; Tables of Data and Results of Tests made at Lowell, Mass., in 1869, 1870. Vol. XXX., Pamphlets. Octavo series. 8vo. 51 pp. Lowell, 1871.
- SWEET, S. H. Report on Coal to the New-York State Senate, 1865. 8vo. 88 pp. Albany.
- SYNOPSIS of Organic Chemistry. Printed for the Junior Classes of Union College. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 12 pp. Troy, 1864.
- SYSTEM of Instruction (A) for the Practical Use of the Blowpipe. 12mo. 269 pp. New-York, 1858.

T.

- TASHE, HANS. Kurzer Ueberblick über das Berg-Hütten-und Salinen-Wesen im Grossherzogthum Hessen. 8vo. 92 pp. Darmstadt, 1858.
- TAYLOR, A. S. Poisons in Relation to Medical Jurisprudence. Second American from Second London edition. 8vo. 755 pp. Philadelphia, 1859.
- J. E. H. The History and Description of Fossil Fuel, the Collieries and Coal Trade of Great Britain. Second edition. 8vo. 485 pp. London, 1841.
- James W. *See under* Reports of the Special Commissioners on the Mineral Resources of the United States West of the Rocky Mountains.
- R. C. Statistics of Coal. Second edition. Revised by S. S. Haldeman. 8vo. 640 pp. Philadelphia, 1855.
- W. B. A Communication from the State Engineer and Surveyor, transmitting a report on Coal. 8vo. 94 pp. Albany, 1865.
- W. J. Manufacture of the Oxide of Zinc near Lancaster, Pa. Vol. VII., Pamphlets. Octavo series. 8vo. 3 pp.
- Mineralogical Notes. Vol. XII., Pamphlets. Octavo series. 8vo. 4 pp. 1858.
- The same as above. Vol. XII., Pamphlets. Octavo series. 8vo. 5 pp. 1859.
- TECHNOLOGIST, (The.) *See, under Journals*, Industrial Monthly.
- TENNANT, and Mitchell, Walter. Mineralogy and Crystallography. 12mo. 587 pp. London, 1860.

- TENNER, J. Handbuch der Metale. Legirungen.
12mo. 134 pp. Quedlinburg, 1860.
- TERHUNE, R. H. Steel Rail Manufacture. Containing a Theoretical and Practical Description of the Bessemer Process.
8vo. Jöliet, Ill., 1874.
- THALEN, R. Le Spectre d'Absorption de la Vapeur d'Iode.
Vol. I., Pamphlets. Quarto series.
4to. 12 pp., IV. plates. Upsal, 1869.
- THENARD, L. J. Traité de Chimie élémentaire.
2 vols. 8vo. Brussels, 1829.
- THOMAS, Cyrrus. *See under* United States Geological Survey of the Territories. Quarto series.
- THOMPSON, Thomas. An Attempt to Establish the First Principles of Chemistry by Experiments. 2 vols. 8vo. London, 1825.
- An Outline of the Sciences of Heat and Electricity.
8vo. 583 pp. London, 1830.
- A System of Chemistry, from the Fifth London edition, with notes by Thomas Cooper.
4 vols. 8vo. Philadelphia, 1818.
- A System of Chemistry of Inorganic Bodies.
2 vols. 8vo. London, 1831.
- On a New Combustible Gas. Vol. V., Pamphlets. Quarto series.
4to. 8 pp. Edinburgh, 1827.
- On Some of the Compounds of Chromium.
4to. 73 pp. London, 1827.
- Outlines of Mineralogy, Geology and Mineral Analysis. Seventh edition.
2 vols. 8vo. London, 1836.
- Some Experiments on Gold. Vol. III., Pamphlets. Quarto series.
4to. 11 pp. Edinburgh, 1827.
- W. Magnetische Induction in Crystallinische Mitteln.
8vo. 14 pp.
- THOMPSON'S Annals of Philosophy. *See under Journals.*
- THURSTON, R. H. Experimental Steam Boiler Explosions. Vol. IV., Pamphlets. Octavo series.
8vo. 12 pp. Philadelphia, 1872.
- On the Molecular Changes Produced in Iron by Variations of Temperature. *Reprinted from the Iron Age.*
8vo. Philadelphia, 1873.
- TILLOCH'S Philosophical Magazine and Journal of Science. *See under Journals*, London, Dublin and Edinburgh Philosophical Magazine and Journal of Science.
- TILMAN, E. Der Bergbau und das Amalgations Verfahren in dem Bergwerks-Districtte von Guanajuato in Mexico.
4to. 73 pp. Munster, 1866.
- TODD, R. B. The Cyclopedia of Anatomy and Physiology.
4 vols. 8vo. London, 1836-1852.
- TODHUNTER, J. Algebra for the Use of Colleges and Schools, with numerous examples. Sixth edition. Revised.
12mo. 608 pp. London, 1873.
- TOMLINSON, Charles. *See* Hansard, Thomas.
- TOPHAM, J. Chemistry made Easy, for the Use of Farmers.
12mo. 44 pp. New-York, 1852.

- TORNQVIST, (Sv. Leonh.) Om Fågelsångstraktens Undersiluriska.
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- Om lagerföljden i Dalarnes undersiluriska bildningar.
Vol. VII., Pamphlets. Quarto series. 4to. 20 pp., I. plate.
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- Om de Geoliska forskningarna i Norge. Vol. VII., Pamphlets. Quarto series. 4to. 20 pp.
- TORREY, John. *See* Natural History of the State of New-York. Part II. Botany; *also*, United States and Mexican Boundary Survey. Part II.; *also*, United States Exploring Expedition during the years 1838-1842.
- TRAILL, G. W. An Elementary Treatise on Quartz and Opal. 12mo. 73 pp. Edinburgh, 1870.
- TRALL, R. T. Tobacco; its History, Nature and Effects, with Facts and Figures for Tobacco Users. 12mo. New-York, 1854.
- TRANSACTIONS of Societies and Institutions. *See under appropriate title under Journals.*
- TREADWELL, Daniel. On the Construction of Hooped Cannon. Sequel to a Memoir "On the Practicability of Constructing Cannon of Great Calibre," &c. Vol. XX., Pamphlets. Octavo series. 8vo. 40 pp. Boston, 1864.
- On the Measure of the Forces of Bodies Moving with Different Velocities. Vol. V., Pamphlets. Octavo series. 8vo. 20 pp. Cambridge, 1861.
- TREATISE on the Manufacture, Imitation and Reduction of Foreign Wines, Brandies, Gins, Rum, &c., and all kinds of Domestic Liquors. Based upon the French System. By a Practical Chemist. 12mo. 208 pp. Philadelphia, 1860.
- TREDGOLD, Thomas. Elementary Principles of Carpentry. Second edition. 4to. 208 pp., XXII. plates. London, 1828.
- The same as above. Fifth edition. Corrected and enlarged, with an Appendix, by Peter Barlow. 4to. 336 pp., LXIV. plates. London, 1870.
- The Steam Engine. 4to. 370 pp., XX. plates. London, 1827.
- TRIPON, J. B. Études de Projections D'Ombres et de Lavis à l'usage de toutes les Écoles des Architectes et de Mécaniciens. 2 vols. 8vo. text and plates. Paris, 1848.
- TROOST, Gerard. Fifth, Eighth and Ninth Geological Reports to the Twenty-third, Twenty-sixth and Twenty-seventh General Assemblies of Tennessee. 8vo. 76, 20, 39 pp. Nashville, 1840.
- TROSKA, Richard. Die Hochofen-Dimensionen auf Grundlage des Hochofen-Prozesses. 8vo. 46 pp. Weimar, 1868.
- TROWBRIDGE, W. P. Proposed Plan for Building a Bridge across the East River, at Blackwell's Island. Vol. X., Pamphlets. Quarto series. 4to. 11 pp., II. diagrams. New-York, 1868.
- TROY and Greenfield Rail-Road and Hoosac Tunnel. Vol. XVIII., Pamphlets. Octavo series. 3 Pamphlets. 38, 54, 56 pp. Boston, 1865, 1866.

- TRURAN, W. The Iron Manufacture of Great Britain. Second edition. 8vo. 306 pp., LXXXIV. plates. New-York, 1863.
- TSCHELNITZ, S. Farben Chemie ins besonderer. Oel und Wasserfarben. 8vo. 302 pp. Vienna, 1857.
- TSCHERMAK, G. Grundriss der Mineralogie für Schulen. 8vo. 218 pp. Vienna, 1863.
- Mineralvorkommnisse von Joachimsthal und Kremnitz. vol. XL, Pamphlets. Octavo series. 8vo. 12 pp. 1867.
- TUFFEAU, De la Craie. Esquisses Geologiques et Paleontologiques des Couches Cretacées de Limbourg. 8vo. 265 pp. Brussels, 1859.
- TUOMEY, M. Reports on the Geology of South Carolina. 4to. 293 pp. Columbus, S. C., 1848.
- Second Biennial Report on the Geology of Alabama. 8vo. 292 pp. Montgomery, Ala., 1858.
- M., and Holmes, F. S. The Pleiocene Fossils of South Carolina. 52 pp., XXX. plates. The Post Pleiocene Fossils. 64 pp., X. plates. 4to. Charleston, S. C., 1857.
- TURNBULL, Wm. Reports on the Construction of the Piers of the Aqueduct of the Alexandria Canal. 4to. 49 pp. Washington, 1873.
- TURNER, Edward. Chemical Examination of the Oxydes of Manganese. Vol. X., Pamphlets. Quarto series. 4to. 32 pp. Edinburgh, 1828.
- P. A. Treatise on Roll Turning for the Manufacture of Iron. Translated and Adapted by J. B. Pease. 2 vols. text and plates. New-York, 1869.
- Die Eisenhüttenwesen in Schweden. 8vo. 86 pp. Freiberg, 1858.
- Die Stabeisen und Stahlbereitung. 2 vols. 8vo. 297, 312 pp. Freiberg, 1858.
- Die Walzenkaliber für die Eisenfabrikation. 8vo. 94 pp., X. plates. Leipsig, 1867.
- Russlands Montan-Industrie. 8vo. 206 pp., V. plates. Leipsig, 1871.
- *See, also*, Bell, J. L.; *also*, under Exhibition of the Works of Industry of All Nations, London, 1851; *also*, under International Exhibition, London, 1862.
- TWINING, Thomas. Technical Training. Being a Suggestive Sketch of a National System of Industrial Instruction, founded on a General Diffusion of Practical Science among the People. 8vo. 458 pp. London, 1874.
- TYNDALL, John. Notes of a Course of Nine Lectures on Light. 8vo. 74 pp. London, 1870.
- TYSON, P. T. First Report to the House of Delegates of Maryland, with Appendix on the Mineral resources of Maryland. 8vo. 145, 20 pp. Annapolis, 1860.

U.

- ÜBER die Chursächsische Bergwerksverfassung. Ein Beytrag zur Statistik von Sachsen. 8vo. 146 pp. Leipsig, 1787.
- ÜBERSICHT über die Production der Bergwerke, Salinen und Hütten in dem Preussischen Staate im Jahre, 1871. 4to. Berlin, 1872.
- ULRICH, G. H. F. Notes and Observations on the Nuggetty Reef, Maldon. (Quarter sheet, 14° N. W.) *Geological Survey of Victoria*. Vol. XIII., Pamphlets, Octavo series. 8vo. 9 pp., 1. plate. Melbourne.
- ULTZMANN, Robert, and Hoffman, Karl Berthold. Anleitung zur Untersuchung des Harnes. 12mo. 133 pp. Vienna, 1871.
- Atlas der Physiologischen und Pathologischen Harnsedimente. 8vo. 44 tables. Vienna, 1872.
- UNION Stone Co. The Union Emery Wheel, Solid and with Stone Centre. 12mo. New-York, 1872.
- UNITED STATES and Mexico Boundary Survey, under Major W. H. Emory, Commissioner. *Ex. Doc., 1st Session, 34th Cong. Vol. XIV.*
- Part I., Subdivision 1. General Description of the Country, &c., by W. H. Emory.
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- Part III. Mammals of the Boundary by S. F. Baird. 3 vols. 4to. Washington, 1859.
- UNITED STATES Coast Survey. A. D. Bache, LL. D., Superintendent. Annual Report of the Superintendent of the Coast Survey, showing the Progress of the Survey during the years 1852, 1853, 1854, 1856 to 1863 and 1865. 12 vols. 4to. Washington, 1853-1867.
- Appendices to above. Appendix IX. Schott, C. A. Determination of Time, by means of the Transit Instrument. *U. S. Coast Survey Manual*. 4to. 17 pp., 1. plate. Washington.
- Appendix X. Schott, C. A.. Determination of the Astronomical Latitude of a Station, by means of the Zenith Telescope. *U. S. Coast Survey Manual*. 4to. 14 pp., 1. plate. Washington.
- Appendix XI. Schott, C. A. Determination of the Astronomical Azimuth of a Direction. *U. S. Coast Survey Manual*.

UNITED STATES Coast Survey. A. D. Bache, LL. D., Superintendent.
Addenda to Appendices X. and XI.

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Appendix XVI. Pierce, *Prof.* Benjamin. Report on the
Determination of the Longitude of America and Europe,
from the Solar Eclipse of July 28, 1851.

4to. 79 pp. Washington.

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UNITED STATES Geological Survey of the Territories. Hayden,
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Preliminary Reports. Octavo series.

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Preliminary Report of the Survey of Montana and portions
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Preliminary Report of the Survey of Wyoming and portions
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First, Second and Third Annual Reports, for the years 1867,
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Final Report on Nebraska and portions of the Adjacent Ter-
ritories. 8vo. 264 pp., XI. plates. Washington, 1872.

Sixth Annual Report, embracing portions of Montana, Idaho,
Wyoming and Utah; being a Report of Progress of the
Explorations for the year 1872.

8vo. 844 pp. Washington, 1873.

— Final Reports. Quarto series.

Vol. I. Leidy, Joseph. Fossil Vertebrates. Part I. Con-
tributions to the Extinct Vertebrate Fauna of the Western
Territories.

4to. 358 pp., XXXVII. plates. Washington, 1873.

Vol. V. Thomas, Cyrus. Zoology and Botany. Part I.
Synopsis of the Acridadæ of North America.

8vo. 258 pp., I. plate. Washington, 1873.

— Miscellaneous Publications. No. 1. Gannett, Henry. List
of Elevations in that portion of the United States west of
the Mississippi River. Pamphlet. 8vo. Washington, 1873.

No. 2. Gannett, Henry. Meteorological Observations during
the year 1872 in Utah, Idaho and Montana.

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— Light House Board. A Series of thirty pamphlets, 8vo.
and 4to., and ninety plates, 2to., descriptive and illustrative
of the U. S. Light House System; including Plan of Organi-
zation, Description of Apparatus, List and Location of Light
Houses, Instructions to Keepers, &c. Washington, 1871.

- UNITED STATES Signal Office, Washington, D. C. A Complete Set of the Blanks used with the Recording Instruments of the U. S. Signal Office at Washington, D. C.
- Naval and Astronomical Expedition to the Southern Hemisphere during the years 1849, 1850, 1851 and 1852. Gilliss, *Lieut. J. M.*, Superintendent. Natural History. Vol. I. Chili. Vol. II. The Andes and the Pampas. 2 vols. 4to. Washington, 1855.
- Naval Observatory. A Set of the Blanks used for Recording and Reducing Observations in the U. S. Naval Observatory. *See, also, under* Washington Meteorological and Astronomical Observations.
- Patent Office, Reports, &c.
- Rail-Road and Mining Register. } *See under*
- Signal Office, Washington. } *Journals.*
- UNIVERSITY of the State of New-York.
- URBIN, Ed. Guide for the Puddling of Iron and Steel. Vol. VII, Pamphlets. Octavo series. 8vo. 25 pp.
- URE, Andrew. Dictionary of Arts, Manufactures and Mines. 2 vols. 8vo. New-York, 1863.
- Supplement. 8vo. New-York, 1864.

V.

- VALERIUS, B. Theoretisch-praktisches Handbuch der Stabeisen Fabrikation. Durch bearbeitet von Carl Hartmann. 8vo. 606 pp. Freiberg, 1845.
- Supplement to above. 8vo. 143 pp. Freiberg, 1848.
- Second Supplement to above. 8vo. 150 pp. Freiberg, 1851.
- Theoretisch-praktisches Handbuch der Roheisen-Fabrikation. Durch bearbeitet von Carl Hartmann. 8vo. 734 pp., XXVIII. plates. Freiberg, 1851-1853.
- Supplement to above. 8vo. 241 pp., V. plates. Freiberg, 1851-1853.
- VALICOURT, E. de. Nouveau Manuel Complet du Tourneur. Vol. I. 24mo. 336 pp. Paris, 1848.
- VAN BENDEN, P. J. Un Palaedaphus Nouveau du Terrain Dévoien. Vol. XXII., Pamphlets. Octavo series. 16 pp., I. plate.
- VAN DEN BINKHORST, J. T. B. Couches cretacées du Limbourg. Première partie. 8vo. 276 pp. Maastrich, 1859.
- VAN HASSELT, A. W. M. Handbuch der Giftlehre. In Zwei Theilen. Erste Theil. Allgemeine Giftlehre und Die Gift des Pflanzenreichs. Zweite Theil. Die Thiergifte und die Mineralgifte. Ausdem Hollandischen frei bearbeitet mit Zusätzen Versehen von J. B. Henkel. 2 vols. 8vo. Brunswick, 1862.
- VAN NOSTRAND's Eclectic Engineering Magazine. *See under Journals.*

- VAN RENSSELAER, Jeremiah. Lectures on Geology.
8vo. 358 pp. New-York, 1825.
- VANUXEM, Lardner. An Essay on the Ultimate Principles of Chemistry, Natural Philosophy and Physiology. Part I.
8vo. 91 pp. Philadelphia, 1827.
- See Natural History of the State of New-York. Part IV.
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- VATTHAIRE, A. de. Études sur les hautes Fourneaux.
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- VERGNAUD, A. D. Chimie Amusante.
24mo. 383 pp. Paris, 1854.
- VERHANDLUNGEN der K. K. Geologisch Reichsanstalt. See under Journals.
- VERSAMMLUNG von Berg-und Hüttemännern zu Wien, 1861.
- VERZEICHNISS sämmtlicher von der Kais. Akademie der Wissenschaften seit ihrer gründung bis letzten October 1868. Veröffentlichten Druckschriften.
12mo. 300 pp. Vienna, 1869.
- VIENNA Exposition, 1873. See Wiener Weltausstellung, 1873.
- VILLEFOSSE, Héron de. La Richesse Minérale.
3 vols. 4to. text; 2to. plates. Paris, 1869.
- Mineral-Reichthum. Edited by Carl Hartmann.
5 vols. text; Atlas, LXXVI. plates. Sondershausen, 1872.
- VILLERS, B. de, Dufrénoy, P. A., and Beaumont, Élie de. Carte Géologique de la France avec Explication.
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- VIOLETTE, H. Guide Pratique de la Fabrication des Mines.
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- VISQUESNEL, A. Journal d'un Voyage dans la Turquie d'Europe.
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- VIVENOT, Franz v. Bergbau und Hüttenwesen. (Gruppe I. Section I.) Montanproducte mit Ausnahme der Fossilen Brennstoffe. *Officieller Berichte, Wiener Weltausstellung.* Vol. XXI., Pamphlets. Octavo series. 8vo. 9 pp. Vienna, 1873.
- VOGEL, August. Der Torf seine Natur und Bedeutung.
12mo. 170 pp. Brunswick, 1859.
- VOGELSANG, H. Philosophie der Geologie und Mikroskopische Gesteinstudien. 8vo. 229 pp., X. plates. Bonn, 1867.
- M. Lehrbuch der Eisen-Smailirkunst.
8vo. 86 pp., II. plates. Brunswick, 1851.
- Ueber die Systematik der Gesteinlehre und die Eintheilung der gemengten Silikatgesteine. Vol. XX., Pamphlets. Octavo series.
8vo. 37 pp. Bonn, 1873

- VOIGT, F. S. Lehrbuch der Zoologie. "Heidelberger Naturgeschichte." 6 vols. 8vo. Stuttgart, 1835.
- VOLGER, G. H. O. Versuch einer Monographie des Borasites. 8vo. 244 pp. Hannover, 1855.
- VON BREMEN, L. & Co. Taucher-Apparate. 12mo. Kiel, 1873.
- VON BUCH, L. Physikalische Beschreibung der Canarischen Inseln. 4to. 407 pp., text; Atlas, XIII. plates. Berlin, 1825.
- VON COTTA, Bernhard. A Treatise on Ore Deposits. Translated by Frederick Prime, Jr. 8vo. 511 pp. New-York, 1870.
- Die Gesteinlehre. 8vo. 233 pp. Freiberg, 1862.
- Die Lehre von den Erzlagerstätten. 8vo. 534 pp. Freiberg, 1855.
- Erzlagerstätten im Banat und im Serbien. 8vo. 108 pp. Vienna, 1865.
- *See, also*, Prime F., and Von Cotta, B.
- VON HUMBOLDT, A. Essai Géognostique sur le Gissement des Roches dans les deux Hémisphères. 8vo. 379 pp. Paris, 1823.
- VON KRUSENSTEIN, Paul. Geographische Bestimmungen. 4to. 148 pp. St. Petersburg, 1846.
- VON LANG, Victor. Lehrbuch der Krystallographie. 8vo. 358 pp. Vienna, 1866.
- VON MULLER, J. W. Fragmentarische Mittheilungen über die in Afrika Gemachten Reisen. 4to. 18 pp. 1849.
- VON RITTENGER, P. Ritter. Lehrbuch der Aufbereitungskunde in ihren neuesten entwicklung und ausbildung systematisch dargestellt. 8vo. 595 pp. text; Atlas, XXXIV. plates. Berlin, 1867.
- VON WIED, Prinz Max. Ueber die Selbstständigkeit der Species des Ursus Ferox Desm mit Anatomischen Bemerkungen von Dr. C. Mayer. Vol. VI., Pamphlets. Quarto series. 4to. 51 pp., III. plates. 1856.

W.

- WACHLER, L. Die Eisen-Erzeugung Oberschlesiens. 8vo. Oppeln, 1847-1851.
- Betrachtungen über die jetzige Lage des Hochofenbetriebes in Oberschlesien. 8vo. 52 pp. Oppeln, 1857.
- Geschichte der Eisenhütten werke zu Malapane. 8vo. 120 pp. Glogaa, 1856.
- WAGNER, Andreas. Monographie der fossilen Fische aus den lithographischen Schiefer-Bayeres. 2 parts. 4to. 138, 136 pp., IV., VI. plates. Munich, 1861-1863.
- Rudolph. A Handbook of Chemical Technology. Translated and edited from the Eighth German edition, with extensive additions, by William Crookes. 8vo. 745 pp. New-York, 1872.

- WAGNER's Jahresbericht. *See Catalogue of Periodical Publications.*
- WAILES, B. L. C. Report on the Agriculture and Geology of Mississippi. 8vo. 371 pp. 1854.
- WALDEGG, E. H. von. Handbuch für Specielle Eisenbahntechnik. 2 vols. 8vo. text and plates. Leipsig, 1869.
- WALKER, Francis A. Report of the Superintendent of the Ninth Census of the United States. Compiled from the Original Returns, under the direction of the Secretary of the Interior. Vol. I. Population and Social Statistics of the United States. Vol. II. Industry and Wealth of the United States. 2 vols. 4to. Washington, 1870.
- WALKHOFF, Louis. Der Practische Rübenzuckertabricant und Raffinadeur. Ein Lehr-und Hülfsbuch. 8vo. 900 pp. Brunswick, 1867.
- WALLACE, William. The Laws which regulate the Deposition of Lead Ore in Veins, illustrated by an examination of the Geological Structure of the Mining Districts of Alston Moor. 8vo. 258 pp. London, 1861.
- WALTERSHAUSEN, W. Sartorius v. Ueber die submarinen vulkanischen Ausbrüche in der Terpiar-Formation des Val di Noto im Vergleich mit verwandten Erscheinungen Aetna. 12mo. 142 pp. Gottingen, 1846.
- WÄNGENHEIM, E. Der Bessemerprocess. 12mo. 148 pp. Weimar, 1863.
- WANKLYN, Chapman. Water Analysis. A Practical Treatise on the Examination of Potable Water. 16mo. 103 pp. London, 1863.
- WARD Cabinets of Mineralogy and Geology in the University of Rochester—Notice of the. Vol. XX., Pamphlets. Octavo series. 8vo. 44 pp. Rochester, 1863.
- H. A. Notice of the Megatherium Cuvieri, the Giant Fossil Ground-Sloth of South America. 4to. 34 pp., I. plate. Rochester, 1864.
- WARE, W. R. An Outline of a Course of Architectural Instruction. Vol. XXX., Pamphlets. Octavo series. 8vo. 36 pp. Boston, 1866.
- WARREN, C. M. On a Process of Fractional Condensation. 4to. 13 pp.
- Researches on the Volatile Hydrocarbons. Two Memoirs.
- I. On the Volatile Hydrocarbons from Coal Tar, Naphtha, Oil of Cumin and Cuminic Acid.
- II. On the Influence of C. H. upon the Boiling Points in Homologous Series of Hydrocarbons and in some series of their Derivatives; with Critical Observations on Methods of Taking Boiling Points. 8vo. 42 pp. Cambridge, 1865.
- and Storer, F. H. Researches on the Volatile Hydrocarbons. Two Memoirs.
- I. Naphtha from Lime Soap. II. Naphtha from Rangoon Petroleum. Vol. V., Pamphlets. Quarto series. 4to. 41 pp. Cambridge, 1866

- WARREN, G. K. Report and Plan for the Reclamation of the Basin of the Mississippi River Subject to Inundation, by the Board of Commissioners appointed under Act of Congress, approved June 22, 1874. 8vo. 160 pp., IV. plans. Washington, 1873.
- J. C. The Mastodon Giganteus of North America. 4to. 219 pp., XXVIII. plates. Boston, 1862.
- S. Edward. Notes on Polytechnic Schools in the United States; their Nature, Position, Aims and Wants. Vol. XIX., Pamphlets. Octavo series. 8vo. 58 pp. New-York, 1866.
- WASHINGTON Aqueduct. Plans and Specifications for. 8vo. Washington, 1871.
- Astronomical and Meteorological Observations. *See Catalogue of Periodical Publications, under C.* United States Naval Observatory, p. 179.
- WARZÉE, André. Exposé Historique de L'Industrie du Fer dans la Province de Liège. Vol. VIII., Pamphlets. Octavo series. 8vo. 94 pp. Liege, 1861.
- Exposé Historique et Statistique de L'Industrie Métallurgique dans Le Hainaut. 8vo. 148 pp. Mons, 1861.
- WATER-GAS Process—History and Value of the. Vol. XVI., Pamphlets. Octavo series. 42 pp. New-York, 1864.
- WATERHOUSE, S. The Resources of Missouri. Vol. XXIV., Pamphlets. Octavo series. 8vo. 64 pp. St. Louis, 1867.
- WATHNER, J. Practischen Eisen und Eisenwarrenkennen von J. Koditek. 8vo. 230 pp. text; Atlas, XXXI. plates. Gratz, 1860.
- WATSON, R. Chemical Essays. Seventh edition. 5 vols. 16mo. London, 1800.
- S., and Rothrock, J. T. *See under* Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian.
- Winslow C. A Supplement to the Report on the Survey of Essex County, N. Y. 8vo. 39 pp. Albany, 1853.
- WATTS, Henry. A Dictionary of Chemistry and the allied branches of other Sciences. 5 vols. and two Supplements. 8vo. London.
- Vol. I. Abichite—Conglomerate. 1137 pp. 1863.
- Vol. II. Conhydrine—Gytge. 985 pp. 1864.
- Vol. III. Hæmaphein—Mysorin. 1096 pp. 1865.
- Vol. IV. Nacrite—Pyruvic Acid. 1115 pp. 1866.
- Vol. V. Quadrantoxide—Zymurgy. 1188 pp. 1868.
- First Supplement. Acetic Acid—Sulphur. 1194 pp. 1872.
- Second Supplement. 1215 pp. 1875.
- W. Marshall. Index of Spectra. 8vo. 74 pp., X. plates. London, 1872.
- WEBER, R. Atomgewichts-Tabellen. 8vo. 125 pp. Brunswick, 1852.
- WEDDING, H. Grundriss der Eisenhüttenkunde. 8vo. 308 pp. Berlin, 1871.
- WEHRLE, A. Lehrbuch der Probir und Hüttenkunde. 2 vols. 8vo. text; Atlas, XXVII. plates. Vienna, 1841.

- WEINGEHEIMNISSE. 8vo. 48 pp. Nuremburg, 1858.
- WEINGEHEIMNISSE. Zusammenstellung alle bisher oft sehr geheim gehaltener Mittel zur natürlichen und künstlichen Weinbereitung jeder Gattung. 12mo. 123 pp. Nuremburg, 1858.
- WEISBACH, Albin. Tabellen zur Bestimmung der Mineralien. 12mo. 113 pp. Leipsig, 1869.
- Julius. A Manual of the Mechanics of Engineering. Translated from the Fourth German Edition by Eckley B. Coxe. Vol. I. Theoretical Mechanics. 8vo. 1112 pp. New-York, 1872.
- Die Experimental-Hydraulik. 8vo. 281 pp. Freiberg, 1855.
- Lehrbuch der Ingenieur-und Maschinen-Mechanik. Fünfte verbesserte und vervollständigte Auflage. Vol. I. 8vo. 1301 pp. Brunswick, 1870-1875.
- Lehrbuch der Theoretischen Mechanik. 3 vols. 8vo. Brunswick, 1855, 1863, 1865.
- Appendix. 8vo. 43 pp. Brunswick, 1860.
- Principles of the Mechanics of Machinery and Engineering. 2 vols. 8vo. London, 1847, 1848.
- WELLS. Principles and Applications of Chemistry. Sixth edition. 8vo. 515 pp. New-York, 1863.
- David A. Reports of the Special Commissioner of Revenue. 2 vols. 8vo. Washington, 1866, 1867.
- WELTAUSSTELLUNG zu Wien, 1873. See Wiener Weltausstellung, 1873.
- WENIGER, K. A. Der Praktische Schmelzmeister. 8vo. 138 pp. Prag, 1864.
- WERNER, A. G. A Treatise on the External Character of Fossils. Translated by Thomas Weaver. 12mo. 312 pp. Dublin, 1805.
- Gotthilf. Leitfaden zum studium der Krystallographie. 12mo. 145 pp. Hanover, 1867.
- WEST, Gratien. Statistique des Volumes des Equivalents Chimiques et d'autres donnés relatives à leurs propriétés physiques suivie d'un Memoire sur quelques questions moléculaires. 4to. 304 pp. Paris, 1875.
- WESTENDORF, Karl. Die Bestimmung für Annahme eine Normalmüsse und eine Normalstantsche. 4to. Vienna, 1873.
- WETHERILL, C. M. A Brief Sketch of the Modern Theory of Chemical Types. Vol. XXI., Pamphlets. Octavo series. 8vo. 15 pp.
- Chemical Examination of Two Minerals from the Neighborhood of Reading, Pennsylvania; and On the Occurrence of Gold in Pennsylvania. Vol. IX., Pamphlets. Quarto series. 4to. 7 pp. Philadelphia.
- Chemical Notices—On the Occurrence of Gold near Reading; and, Apparatus for the Analysis of Carbonates. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 4 pp. 1854.
- Examination of Fusil-Oil from Indian Corn and Rye. Vol. XVI., Pamphlets. Octavo series. 8vo. 7 pp.
- Experiments on Itacolumite, (Articulite.) Vol. XII., Pamphlets. Octavo series. 8vo. 7 pp. 1867.

- WETHERILL, C. M. On Adipocere and its Formation. Vol. III., Pamphlets. Quarto series. 4to. 25 pp. Philadelphia, 1855.
- On a New Variety of Asphalt, (Melan-Asphalt.) vol. III., Pamphlets. Quarto series. 4to. 6 pp. Philadelphia, 1852.
- On the Crystallization of Sulphur, and upon the Reaction between Sulphur of Hydrogen, Ammonia and Alcohol. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 8 pp. 1865.
- On the Neutral Sulphate of the Oxide of Ethyle, and the Results of its Decomposition by Water. Vol. III., Pamphlets. Quarto series. 4to. 5 pp. Philadelphia, 1848.
- WHEELER, George M. *See under* Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian.
- assisted by Dr. F. Kampf and J. H. Clark. Report upon the Determination of the Astronomical Co-ordinates of the Primary Stations at Cheyenne, Wyoming Territory, and Colorado Springs, Colorado Territory, made during the years 1872 and 1873. 4to. 82 pp. Washington, 1874.
- WHELPLEY and Storer. Description of their New Method of Separating Metals from Sulphurets and other Ores. Vol. II., Pamphlets. Duodecimo series. 12mo. 12 pp., III. plates. Boston, 1866.
- WHITE, C. A. *See under* Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian.
- First and Second Annual Reports of the State Geologist of Iowa. 8vo. 279 pp. Des Moines, 1868.
- J. H. and B. Silliman, Jr. Petroleum in California. A Brief Account of One Hundred Thousand Acres of Oil Lands in California. Vol. XXXII., Pamphlets. Octavo series. 8vo. 21 pp. New-York, 1865.
- WHITNEY, A. R. Sections of Iron Beams, &c., with tables of weights, co-efficients, dimensions, &c. 2to. 65 pp. New-York.
- J. D. The Geological Survey of the State of California. J. D. Whitney, Director. An Address to the Legislature of California, concerning the Geological Survey of the State, delivered March 12th, 1861. Vol. XIV., Pamphlets. Octavo series. 8vo. 47 pp. San Francisco, 1861.
- An Address on the Propriety of Continuing the State Geological Survey of California; to which are appended, Two Letters, relative to the Progress of the Survey during the years 1864–1865, and 1865–1866; also, the Report of the Commissioners To Manage The Yosemite Valley and The Mariposa Big Tree Grove, for the years 1867–1868. Vol. XV., Pamphlets. Octavo series. 8vo. 23, 14, 15, 14 pp. San Francisco, 1868.
- Letter of the State Geologist relative to the Progress of the State Geological Survey of California during the years 1866–1867. Vol. XIV., Pamphlets. Octavo series. 8vo. 15 pp. Sacramento, 1867.

- WHITNEY, J. D. The Geological Survey of the State of California. Reports of the Survey.
 Geology. Vol. I. Report of Progress and Synopsis of Field Work, from 1860 to 1864. 4to. 498 pp. 1865.
- Ornithology. Vol. I. Land Birds. Edited by S. F. Baird, from the manuscript and notes of J. G. Cooper. 8vo. 592 pp. Cambridge, 1870.
- Palæontology. Vol. I. Carboniferous and Jurassic Fossils by F. B. Meeks. Triassic and Cretaceous Fossils by W. M. Gabb. 2 vols. 4to. 1869.
- The Yosemite Guide Book. 4to. 155 pp., II. maps. 1870.
- Miscellaneous Publications of the Survey. Contributions to Barometric Hypsometry; with tables for use in California. 4to. 88 pp. 1874.
- The Metallic Wealth of the United States. 8vo. 510 pp. Philadelphia, 1854.
- *See, also*, Foster, J. W., and Whitney, J. D.; Hall, James; and Worthen, A. H.
- J. P. The Silver Mining Regions of Colorado. 8vo. 107 pp. New-York, 1865.
- WIBEL, Ferd. Das Gediogene Kupfer und das Rothkupfererz. (Kupferoxydul.) Ein Beitrag zur Lehre den Erzlagerstätten. 8vo. 182 pp. Hamburg, 1864.
- WICKE, Wilh. Anleitung zur Chemischen Analyse. 8vo. 467 pp. Brunswick, 1857.
- WICKSTEED, Thomas. Explanation of the Plates of the Cornish, and Boulton and Watt Engines, erected at the London Water Works, Old Ford. 4to. 24 pp., VIII. plates. London, 1842.
- WIECK, F. G. Das Buch der Erfindungen Gewerbe und Industrien. 5 vols. 12mo. Leipzig, 1861–1863.
- WIENER Akademie der Wissenschaften. *See* Catalogue of Periodical Publications, p. 152.
- WIENER Weltausstellung, 1873.
 Atti Ufficiali della Esposizione Universale di Vienna del 1873. Catalog Generale degli Espositori Italiani. 8vo. 296 pp. Rome, 1873.
- Amtlicher Katalog der Ausstellung des Deutschen Reiches. 16mo. 672 pp. Berlin, 1873.
- Belgique. Catalogue des Produits Industriels et des Œuvres D'Art. 16mo. 373 pp. Brussels, 1873.
- Brewer, Eben. Official Catalogue of the American Department. 4to. 148 pp. London, 1873.
- Catalogue of the Exhibition. Printed for the Use of the British Jurors. 8vo. 174 pp. London, 1873.
- Catalogue Speciale de la Section Russe à L'Exposition Universelle de Vienna en 1873, publiée par la Commission Imperiale de Russie. 12mo. 218 pp. St. Petersburg, 1873.

WIENER Weltausstellung.

Commonwealth of Massachusetts. Report of the Commissioners to the Exposition at Vienna.

8vo. 91 pp. Boston, 1874.

Descriptive Catalogue of the Exhibits in the New-Zealand Courts of the Vienna Exhibition, 1873. 4to. 47 pp.

Die Ausstellung der Geologischen Lands-Untersuchung Schroedens auf der Wiener Weltausstellung, 1873.

8vo. Vienna, 1873.

Die Ausstellungs-Objecte der Königlichen Ungarischen Geologischen Anstalt auf der Wiener Weltausstellung, 1873.

8vo. 1873.

Die Bergbaue und Eisenwerke der Steierischen Eisenindustrie-Gesellschaft. Eine Beilage zu den Ausstellungsgegenständen dieser Gesellschaft auf der Welt-Ausstellung 1873 in Wien.

8vo. Vienna, 1873.

France. Produits Industriels. Première Édition.

12mo. 600 pp. Vienna, 1873.

General Katalog. Hefts, I. to XIX.

8vo. 832 pp. Vienna, 1873.

Kaiserlichen Königlichen Geologischen Reichsanstalt. Catalogue ihrer Ausstellungsgegenstände bei der Wiener Weltausstellung.

8vo. 200 pp. Vienna, 1873.

K. K. priv. österr. Staats-Eisenbahn Gesellschaft. Maschinenfabrik in Wien. Typen-Skizzen und Dimensionen der bei der Wiener Weltausstellung im Jahre, 1873, exponirten 5 Lokomotiven.

V. plates. Small folio.

Katalog für die Sammlung der Bergwerks-Hütten,-Salinen,- und Steinbruchs-Producte von Elsass-Lothringen auf der Wiener Weltausstellung von 1873.

8vo. 98 pp. Strasburg, 1873.

Kerpely, Anton. Das Eisen auf der Wiener Weltausstellung, 1873. 8vo. 229 pp., IV. plates. Schemnitz, 1873.

Kupelweiser, F. Officieller Ausstellungs-Bericht.

Part I. Bergbau und Hüttenwesen. 8vo. 19 pp.

Part II. Das Hüttenwesen. 8vo. 110 pp.

2 Pamphlets. 8vo. Vienna, 1873.

L'Empire du Brésil à L'Exposition Universelle de Vienna en 1873.

8vo. 364 pp. Rio Janeiro, 1873.

Liste der Mitgleider der internationalen Jury.

4to. 73 pp. Vienna, 1873.

Matkovie, Peter. Kroatien-Slavonien nach seinen Physischen und Geistigen Verhältnissen. Denkschrift zur Wiener Weltausstellung, 1873. 12mo. 112 pp. Agram, 1873.

Norwegischer Special Katalog der Weltausstellung, 1873, in Wien. Kunst-Industrie. 8vo. 77 pp. 1873.

Notice sur les Objets Exposés par la Société des Charbonnages de Mariemont; L'Olive Chaud-Bisson. & Carnieres et par la Société des Charbonnages de Bascoup.

8vo. Mons, 1873.

WIENER Weltausstellung.

Officieller Ausstellungs-Berichte herausgegeben durch die
General-Direction der Weltausstellung, unter redaction von
Dr. Karl Theodor Richter.

Parts I. to LXXXVII. Vienna, 1873-1875.

Preliminary Explanatory Circulars.

90 Circulars. 4to. Washington, 1873.

Resumé du Catalogue de la Section Brésilienne à L'Exposition
Internationale à Vienne en 1873.

12mo. 32 pp. Vienna, 1873.

• Schott, E. Kurzer Bericht über die bei der Wiener Weltausstellung, 1873, zur Anschauung gebrachten Eisen-Hütten-Producte, Eisen-und Stahlarbeiten. Vol. VIII., Pamphlets.

Octavo series.

8vo. 34 pp. Leipsig, 1873.

Special Catalog der Ausstellung des Persischen Reiches.

8vo. 151 pp. Vienna, 1873.

Special Catalog der Ausstellung des Königreichs der Niederlande nebst einen uebersichtsplan dieser Ausstellung.

12mo. 166 pp. Vienna, 1873.

Wienerberger Ziegelfabriks-und Bau-Gesellschaft zur zeit
der Wiener Weltausstellung, 1875.

8vo. 92 pp. Vienna, 1873.

Zusammenstellung der Catalogs Nummern die Einzelnen
Länder nach Gruppen und Sectionen Geordnet.

8vo. 38 pp. Vienna, 1873.

WIESNER, Julius. Untersuchungen über die herbstliche Entlaubung der Holzgewächse.

8vo. Vienna, 1871

—— Gummiarten. Harze und Balsame. Die technischen verwendeten.

8vo. 205 pp. Erlangen, 1869.

WIGAND, A. Frischhüttenbetrieb.

8vo. 144 pp. Berlin, 1837.

WIGHAM, J. R. A New Method of Illuminating Lighthouses.

8vo. 8 pp. Dublin, 1865.

WILCOCKS, A. Thoughts on the Influence of Ether in the Solar System.

4to. 104 pp. 1860.

WILL, Heinrich. Anleitung zur Chemischen Analyse zur gebrauch
im Chemischen Laboratorium zu Giessen.

12mo. 314 pp. Leipsig, 1857.

—— Tafeln zur Qualitativen Chemischen Analyse. Fourth edition.

12mo. 22 pp. Leipsig, 1857.

WILLARD and Shaw's Patent Tin Lined Lead Pipe. A Circular.

Vol. XVI., Pamphlets. Octavo series.

—— Improvements in the Construction of Lead Pipe.

8vo. 23 pp. New-York, 1865.

WILLIAMS, C. G. A. Hand-book of Chemical Manipulations.

12mo. 580 pp. London, 1857.

—— C. W. Plates Illustrative of the Combustion of the Gaseous Portion of Coal, and of the Modes by Which It May Be Effected in Furnaces. Vol. II., Pamphlets. Quarto series.

4to. XIV. diagrams. Liverpool, 1841.

- WILLIAMS, J. J. The Isthmus of Tehuantepec: being the Results of a Survey for a Rail-Road to Connect the Atlantic and Pacific Oceans, made by the Scientific Commission under the Direction of Major J. G. Barnard. 8vo. 295 pp. New-York, 1852.
- WILLIAMSON, A. W. Chemistry for Students. 12mo. 479 pp. Oxford, 1868.
- WILLIS, Robert. Principles of Mechanism, designed for the use of Students in the Universities, and for Engineering Students generally. 8vo. 446 pp. London, 1841.
- WILSON, George. Inorganic Chemistry, Revised and enlarged by H. G. Madan. 12mo. 528 pp. London, 1871.
- Jeremiah M., (Chairman.) Report of the Select Committee (No. 2) of the House of Representatives, appointed under the Resolution of January 6, 1873, to make inquiry in relation to the Affairs of the Union Pacific Rail-Road Company, the Credit Mobilier of America, and other matters specified in said Resolution, and in other Resolutions referred to said Committee. 8vo. 786 pp. Washington, 1873.
- WINCHELL, A. First Biennial Report of the Geological Survey of Michigan. 8vo. 339 pp. Lansing, 1861.
- N. H. Geological and Natural History Survey of Minnesota. Appendix to Regents' Report of University of Minnesota. 8vo. 148 pp. St. Paul, 1873.
- WINDOM, Hon. Wm. The Northern Pacific Railway: its Effect upon the Public Credit, the Public Revenues and the Public Debt. A Speech delivered in the House of Representatives, January 5th, 1869. Vol. XIX., Pamphlets. Octavo series. 8vo. 60 pp. Washington, 1869.
- WINES—A Treatise on Foreign Wines, &c. 12mo. 208 pp. Philadelphia, 1860.
- WING, C. H. On Certain Double Sulphates of the Cerium Group. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 10 pp. 1870.
- WINKLER, C. A. Untersuchungen über die Chemischen Vorgänge in der Gay-Lussacschen Condensationsapparaten der Schwefelsäurefabriken. 12mo. 36 pp. Freiberg, 1867.
- G. G. Die Schichten der Avicula Contorta inner-und ausserhalb der Alpen. Vol. XXIII., Pamphlets. Octavo series. 8vo. 51 pp., II. plates. Munich, 1859.
- Kurt Alexander. Erfahrungsgesätze über die Bildung der Schlacken. 16mo. 56 pp. Freiberg, 1827.
- Die europäische Amalgamazion der Silbererze und silberhaltigen Hüttenprodukte. 8vo. 210 pp. Freiberg, 1848.
- WITTSTEIN, G. C. Wiederlegung der Chemischen Typenlehre. 8vo. 96 pp. Munich, 1862.
- WÖHLER, F. Practische Übungen in der Chemischen Analyse. 12mo. 218 pp. Gottingen, 1853.
- Grundriss der Chemie (Anorganischen und Organischen.) 2 vols. 12mo. Berlin, 1848-1851.
- WOLFF, A. F. Die Verzinkung des Eisens. 12mo. 30 pp. Dresden, 1857.

- WOLTERS, A. Das Territorium Idaho und Seine Mineralschatze.
8vo. 8 pp. Vienna, 1873.
- WOLTMAN, R. Beiträge zur Hydraulischen Architectur.
4 vols. 8vo. Gottingen, 1791.
- Beyträge zur Schiffbahrmachung der Flüsse.
4to. 334 pp., VII. plates. Hamburg, 1826.
- WOOD, G. B., and Bache, F. The Dispensatory of the U. S. of
America. Twelfth edition.
8vo. 1704 pp. Philadelphia, 1865.
- De Volson. A Treatise on the Resistance of Materials, and
an Appendix on the Preservation of Timber.
8vo. 245 pp. New-York, 1871.
- A Treatise on the Theory and Construction of Bridges and
Roofs.
8vo. 249 pp. New-York, 1873.
- WOODMAN, John S. An Address on the Inauguration of the Wor-
cester County Institute of Industrial Science. Vol. XVIII., Pam-
phlets. Octavo series.
8vo. 13 pp. Worcester, 1868.
- WOODWARD, S. P. A Rudimentary Treatise on Recent and Fossil
Shells.
12mo. 486 pp. London, 1851-1856.
- WORCESTER, Joseph E. A Dictionary of the English Language.
4to. 1786 pp. Boston, 1860.
- WORMLEY, Theodore G. A Treatise on the Micro-Chemistry of
Poisons. 8vo. 702 pp., XIV. plates. New-York, 1869.
- WORTHEN, A. H., assisted by J. D. Whitney, Leo Lesquereux and
Henry Engelmann. The Geological Survey of Illinois. Vol.
I. Geology. Vol. II. Palæontology. Vol. III. Geology and
Palæontology.
3 vols. 4to. Chicago, 1866-1868.
- WRIGHT, O. A. On the Mineral Well at Waterloo, Wis.
8vo. 2 pp.
- WURTZ Amalgamation Co. of New-York. Statement of the, with
a letter from Henry Wurtz to Prof. B. Silliman, on So-
dium Amalgamation. Vol. VIII., Pamphlets. Octavo series.
- Henry. Contributions to Analytical Chemistry. 3 Pam-
phlets. 38, 14, 9 pp. 1858. Vol. XVII., Pamphlets. Octavo series.
- Occurrence of Cobalt and Nickel in Gaston Co., N. C.
Vol. XII., Pamphlets. Octavo series.
8vo. 7 pp. 1859.
- On the Preparation of some Pure Sulphates, and particularly
of Sulphate of Copper.
8vo. 3 pp. 1858.
- Report upon Grahamite. 8vo. 25 pp. New-York, 1865.
- Report upon a Mineral Formation in West Virginia to the
Ritchie Mineral Resin and Oil Co. Vol. XV., Pamphlets. Octavo
series.
8vo. 25 pp. New-York, 1865.
- and Leeds, Albert R. Reports to the Board of Public
Works of Jersey City on Analyses of the Water of the
Passaic River. Pamphlet. 8vo. Jersey City, 1873.
- Karl Adolph. Dictionnaire de Chimie, Pure et Appliquée.
Vol. I. Part 1. A.-B. 8vo. 686 pp. 1869.
Part 2. C.-G. 8vo. 973 pp. 1873.
Vol. II. Part 1. H.-Phe. 8vo. 920 pp. 1873.
Part 2. Phe.-Rue, 1874. 4 vols. 8vo. Paris.

Y.

- YARNALL. *See* Catalogue of Periodical Publications, page 179, under United States Naval Observatory. Observations for 1871.
- YARROW, H. C. *See under* Geographical and Geological Explorations and Surveys West of the One Hundredth Meridian.
- YEAR Book of Facts in Science and Art. *See* Catalogue of Periodical Publications, page 175.
- YERMOLOW, Al. S. Recherches sur les Gissements de Phosphate de Chaux Fossile en Russie avec Tableaux analytiques et Cartes. 8vo. St. Petersburg, 1873.
- YOUMANS, E. L. The Correlation and Conservation of Forces. 8vo. 438 pp. New-York, 1865.
- YOUNG, Edward. Special Report on the Customs Tariff Legislation of the United States, with Appendices. 8vo. 137 pp. Washington, 1872.
- J. R. The Elements of Integral Calculus, with its Applications to Geometry, and to the Summation of Infinite Series. Revised and Corrected by Michael O'Shannessy, A. M. 8vo. 292 pp. Philadelphia, 1833.

Z.

- ZAENGERLE, Max. Lehrbuch der Mineralogie. 8vo. 160 pp. Brunswick, 1873.
- ZEIPEL, Victor von. Om Monomial-och Fakultetskoefficienter. Vol. X., Pamphlets. Quarto series. 4to. 57 pp.
- ZEITSCHRIFT der Deutschen Geologischen Gesellschaft. } *See* Catalogue of Periodical Publications, pp. 156, 176.
- der Vereins des Deutschen Ingenieure. }
- für Analytische Chemie. }
- für das Berg Huetten und Salinen Wesen. }
- ZEPHAROVICH, Von. Krystallographisches Wand Tafeln. 4to. XI. plates. Prag, 1865.
- ZERNIKOW. Die Theorie der Dampfmaschinen. 8vo. 233 pp. Brunswick, 1859.
- ZERRENNER, C. Anleitung zum Gold—Platin-und Diamanten Waschen. 4to. 141 pp. Leipsig, 1851.
- Der Metallurgischen Gasfeuerung im Oesterreich. 8vo. 278 pp. Vienna, 1856.
- ZEUNER, Gustav. A Treatise on Valve Gears, with Special Reference to the Link Motions of Locomotive Engines. Translated from the German by Moritz Muller. 8vo. 244 pp. London, 1869.
- Die Schiebersteinerungen. 8vo. 181 pp. Freiberg, 1858.
- ZIEMSEN, H. v. Handbuch der Speciellen Pathologie und Therapie. Erster Band. 8vo. 552 pp. Leipsig, 1874.

- ZIGNO, A. de. *Flora fossilis Formationis Oolithica*. Vol. I.
4to. 223 pp., XXV. plates. Padova, 1856-1868.
- ZIGISMONDY, W. *Mittheilungen über die Bohrthermen zu Harkann
auf der Margaretheninsel nächst Ofen, und zu Lippik und
den Bohrbrunnen zu Alesuth*. 12mo. 10 pp. Pest, 1873.
- ZINCKEN, C. F. *Die Physiographie der Braunkohle*.
8vo. 818 pp., II. plates. Hanover, 1867.
- ZIPPE, F. X. M. *Geschichte der Metalle*.
8vo. 364 pp. Vienna, 1857.
- ZIRKEL, Ferdinand. *Die Mikroskopische Beschaffenheit der Mineralien und Gesteine*.
8vo. 502 pp. Leipzig, 1873.
- *Lehrbuch der Petrographie*. 2 vols. 8vo. Bonn, 1866.
- *Untersuchungen über die mikroskopische Zusammensetzung und Struktur Basaltgesteine*.
8vo. 208 pp., III. plates. Bonn, 1870.
- ZUCHOLD, E. A. *Bibliotheca Chemica, 1840-1858*.
8vo. 342 pp. Gottingen, 1859.



ADDENDA.

(The following monographs constitute Vols. I. to XX., XXII., XXIV. and XXV. of the publications of the *Palaeontographical Society*, London. Those marked with an asterisk have been completed.)

BELL, T., *Prof.* A Monograph of The Fossil Malacostracous Crustacea of Great Britain.

Part I. Crustacea of the London Clay.

44 pp., XI. plates. London, 1857.

Part II. Crustacea of the Gault and Greensand.

40 pp., XI. plates. London, 1860.

See, also, Owen, *Prof.*, and Bell, *Prof.*

BINNEY, E. W. Observations on The Structure of Fossil Plants found in the Carboniferous Strata.

Part II. *Lepidostrobus* and Some Allied Cones.

20 pp., VI. plates. London, 1871.

Part III. *Lepidodendron*.

24 pp., VI. plates. London, 1872.

BRADY, H. B. *See* Jones, T. Rupert; Parker, W. K., and Brady, H. B.

BUSK, George. *A Monograph of The Fossil Polyzoa of the Crag.

136 pp., XXII. plates. London, 1857.

DARWIN, Charles. A Monograph on The Fossil *Balanidae* and *Verucidae* of Great Britain.

180 pp., XXIII. plates. London, 1854.

——— *A Monogram on The Fossil *Lepadidae*, or Pedunculated Cirripedes of Great Britain. 88 pp., V. plates. London, 1851.

DAVIDSON, T. A Monograph of British Carboniferous Brachiopoda.

*Vol. I. The Tertiary, Cretaceous Oolitic and Liassic Brachiopoda. 409 pp., XLII. plates. London, 1851–1855.

*Vol. II. The Permian and Carboniferous Brachiopoda.

331 pp., LIX. plates. London, 1858–1863.

Vol. III. The Devonian and Silurian.

528 pp., LXX. plates. London, 1864–1871.

DAWKINS, W. Boyd, and Sanford, W. Ayshford. The British Pleistocene Mammalia.

Part I. Introduction. *Felis spelæ*.

Part III. *Felis spelæ* concluded with *F. lynx*.

VI. plates. 1868.

Part IV. *Felis pardus*, &c.

II. plates. 1871.

Part V. *Ovihos moschatus*.

V. plates. 1871.

218 pp. London.

- DAWKINS, W. Boyd, and Sanford, W. Ayshford. The British Pleistocene Ovidæ. 30 pp., V. plates. London, 1864-1872.
- DUNCAN, *Dr.* Supplement to The Fossil Corals.
 Part I. Tertiary. X. plates. 1865.
 Part II. Nos. 1, 2. Cretaceous. XV. plates. 1868.
 Part IV. No. 1. Liassic. XI. plates. 1866.
 190 pp. London.
- EDWARDS, F. E. A Monograph on The Eocene Mollusca, or Descriptions of Shells from the Older Tertiaries of England.
 Part I. Cephalopoda. IX plates. 1848.
 Part II. Pulmonata. VI. plates. 1852.
 Part III. Nos. 2, 3. Prosobranchiata. XVIII. plates. 1854-1858.
 332 pp. London.
- FORBES, *Prof.* E. *A Monograph on The Radiaria of the Crag, London Clay, &c. 39 pp., IV. plates. London, 1852.
- HARMER, F. W. See Wood, S. V.
- HAIME, Julius. See Milne-Edwards and Haime, Julius.
- JONES, T. Rupert. *A Monograph on The Crag Foraminifera of Great Britain. 78 pp., IV. plates. London, 1866.
- *A Monograph on The Tertiary Entomostraca of Great Britain. 74 pp., VI. plates. London, 1857.
- *A Monograph on The Entomostraca of the Cretaceous Formation of England. 41 pp., VII. plates. London, 1850.
- *A Monograph on The Fossil Estheriæ of Great Britain. 137 pp., 5 plates. London, 1863.
- KING, *Prof.* W. *A Monograph on The Fossils of the Permian Formation of England. 287 pp., XXIX. plates. London, 1850-1855.
- LANKESTER, E. R. See Powrie, J., and Lankester, E. R.
- LYCETT, *Dr.* See Morris, *Prof.*, and Lycett, *Dr.*
- MILNE, Edwards, and Haime, J. A Monograph on The British Fossil Corals.
 *Part I. Crag, London Clay, Cretaceous. XI. plates. 1849.
 *Part II. Oolitic. XIX. plates. 1851.
 *Part III. Peruvian Mountain-limestone. XVI. plates. 1852.
 *Part IV. Devonian. X. plates. 1853.
 *Part V. Silurian. XVI. plates. 1854.
 406 pp. London.
- MORRIS, J., and Lycett, John. A Monograph of The Mollusca from the Great Oolite, chiefly from Minchinhampton and the Coast of Yorkshire. 282 pp., XXX. plates. London, 1850-1863.
 Supplement to above, by Lycett, John. 129 pp., XV. plates. London, 1863.

OWEN, *Prof.* Monograph on The Fossil Reptilia of the Cretaceous Formations.

- *Part I. Chelonia, (Lacertilia, &c.)
118 pp., XXXIX. plates. London, 1851.
- *Supplement 1. Pterosauria, (Pterodactylus.)
19 pp., IV. plates. London, 1857.
- *Supplement 2. Dinosauria, (Iguanodon.)
4 pp., I. plate. London, 1858.
- *Supplement 3. Pterosauria, (Pterodactylus,) and Saurop-
terygia, (Polyptychodon.)
25 pp., VI. plates. London, 1858.
- *Supplement 4. Sauropterygia, (Plesiosaurus.)
18 pp., IX. plates. London, 1862.

——— Monograph on The Fossil Reptilia of the Wealden and Purbeck Formations.

- *Part I. Chelonia, (Pleurosternon, &c.) [Purbeck.]
12 pp., IX. plates. London, 1853.
- *Part II. Dinosauria, (Iguanodon.) [Wealden.]
54 pp., XX. plates. London, 1855.
- *Part III. Dinosauria, (Megalosaurus.) [Wealden.]
26 pp., XII. plates. London, 1857.
- *Part IV. Dinosauria, (Hylæosaurus.) [Wealden.]
19 pp., VIII. plates. London, 1858.
- *Part V. Lacertilia, (Nuthetes, &c.) [Purbeck.]
9 pp., I. plate. London, 1861.
- *Supplement 1. Dinosauria, (Iguanodon.) [Wealden.]
7 pp., III. plates. London, 1858.
- *Supplement 2. Crocodilia, (Streptospondylus, &c.) [Weal-
den.]
25 pp., VIII. plates. London, 1859.
- *Supplement 3. Dinosauria, (Iguanodon.) [Wealden.]
3 pp., I. plate. London, 1864.

——— A Monograph on The Reptilia of the Kimmeridge Clay For-
mation of Great Britain.

16 pp., VI. plates. London, 1861-1869.

——— A Monograph on The Reptilia of the Liassic Formations.

121 pp., XXXVII. plates. London, 1861-1870.

——— A Monograph on The Cetacea of Great Britain.

40 pp., V. plates. London, 1870.

——— *A Monograph on The Fossil Mammalia of the Mesozoic
Formations of Great Britain.

115 pp., IV. plates. London, 1871.

——— and Bell, *Prof.* Monograph on The Fossil Reptilia of the
London Clay, and of the Bracklesham and other Tertiary
Beds.

- *Part I. Chelonia, (Chelone, &c.)
76 pp., XXXVIII. plates. London, 1849.
- *Supplement 1. Chelonia, (Emys.)
3 pp., II. plates. London, 1849.

OWEN, *Prof.*, and Bell, *Prof.*

*Part II. Crocodilia, (Crocodylus, &c.)
46 pp., XIII. plates. London, 1849.

*Supplement 1. Chelonia, (Platemys.)
4 pp., I. plate. London, 1849.

*Part III. Ophidia, (Palæophis, &c.)
18 pp., IV. plates. London, 1849.

PARKER, W. K. *See* Jones, T. R.; Parker, W. K., and Brady, H. B.

PHILLIPS, *Prof.* A Monograph on The Belemnites of Great Britain.
Part I. Introduction.

Parts II., III. Liassic Belemnites.

Part IV. The Oxford Clay, &c. Belemnites.
128 pp., XXXVI. plates. London, 1865-1870.

POWRIE, J., and Lankester, E. Ray. A Monograph on The Fishes
of the Old Red Sandstone.
62 pp., XIX. plates. London, 1868-1870.

SALTER, J. W. A Monograph on The Trilobites of the Mountain
limestone, Devonian, Silurian, and other Formations of Great
Britain. 216 pp., XXXI. plates. London, 1864-1867.

SHARPE, D. *A Monograph on The Upper Cretaceous Cephalo-
poda. 67 pp., XXVII. plates. London, 1853-1857.

SANFORD, W. A. *See* Dawkins, W. B.

WOOD, Searles V. A Monograph of The Mollusca of the Crag, or
Description of Shells from the Middle and Upper Tertiaries
of the East of England.

*Vol. I. Univalves.
216 pp., XXI. plates. London, 1848-1857.

*Vol. II. Bivalves.
344 pp., XXXI. plates. London, 1857-1872.

Supplement to The Crag Mollusca, with an Introduction
on the Crag District by S. V. Wood, Jr., and F. W.
Harmer. 130 pp., VII. plates. London, 1872.

—— S. V., Jr. *See above.*

WOODWARD, H. A Monograph on The Fossil Merostomata of
Great Britain. 120 pp., XV. plates. London, 1866-1872.
Parts I., II. Pterogotus.
Part III. Pterogotus and Slimonia.

WRIGHT, Thomas. A Monograph on The British Fossil Echinoder-
mata from the Oolitic Formations.

Vol. I. 474 pp., XLIII. plates. London, 1857-1861.

Vol. II. 154 pp., XIX. plates. London, 1863-1866.

—— The Cretaceous Echinodermata. Vol. I.
160 pp., XLV. plates. London, 1864-1871.

CATALOGUE
OF
PERIODICAL PUBLICATIONS.

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Where figures or numerals, or the names of months are used in this Catalogue, they are to be considered, *in all cases*, inclusive.

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TRANSACTIONS OF SOCIETIES AND INSTITUTIONS.

ACADEMIE DES SCIENCES DE PARIS. *See* INSTITUT DE FRANCE.

ACADEMIE IMPÉRIALE DES SCIENCES DE ST. PETERS-BOURG.

BULLETIN DE L'ACADEMIE IMPÉRIALE DES SCIENCES.

4to. Published irregularly. St. Petersburg, 1860 to date.

Tomes XVIII. and XIX., (Parts 1, 2, 3.)

MELANGES PHYSIQUES ET CHIMIQUES TIRÉS DU BULLETIN DE L'Académie Impériale des Sciences de St. Petersburg.

Vols. I., 1849 to 1854; II., 1854 to 1856; III., 1856 to 1859; IV., 1860 to 1861; V., 1861 to 1864; VI., 1864 to 1866; VII., 1867 to 1868; VIII., 1868 to 1873.

ACADEMY OF NATURAL SCIENCES. PHILADELPHIA.

JOURNAL OF THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA.

Second Series. Vols. IV., 4to., (Parts 2, 3, 4,) V., VI., (Part 1.) Philadelphia, 1862 to 1866.

PROCEEDINGS OF THE ACADEMY OF NATURAL SCIENCES OF Philadelphia.

Vols. I. to XVIII., 1841 to 1866. 18 vols. 8vo. Philadelphia.

ACADEMY OF SCIENCE. ST. LOUIS.

TRANSACTIONS OF THE ACADEMY OF SCIENCE, ST. LOUIS.

Vol. I., 1856 to 1860; Vol. II., 1861 to 1868.

AGRICULTURAL SOCIETIES OF THE STATE OF MASSACHUSETTS.

ABSTRACT OF THE RETURNS OF THE AGRICULTURAL SOCIETIES of the State of Massachusetts, for the years

1846, 1856, 1857, 1858. 4 vols. 8vo. Boston.

TRANSACTIONS OF THE AGRICULTURAL SOCIETIES OF THE STATE of Massachusetts, for the years

1847, 1848, 1849, 1851.

4 vols. 8vo. Boston, 1848 to 1852.

AGRICULTURAL SOCIETY OF THE STATE OF WISCONSIN.

TRANSACTIONS OF THE AGRICULTURAL SOCIETY OF THE STATE
of Wisconsin, for the years
1854, 1855, 1856, 1857. 4 vols. 8vo. Minneapolis.

ALBANY INSTITUTE. ALBANY, N. Y.

TRANSACTIONS OF THE ALBANY INSTITUTE.

Vol. I., 1830; Vol. II., 1833 to 1852; Vol. III., 1855; Vol.
IV., 1858 to 1863. 4 vols. 8vo. Albany.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. UNITED STATES.

PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

First Meeting at Philadelphia,	1848.	<i>Philadelphia,</i>	1849.
Second " Cambridge,	1849.	<i>Boston,</i>	1850.
Third " Charleston,	1850.	<i>Charleston,</i>	1850.
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Twenty-First " Dubuque,	1872.	"	1872.
Twenty-Third Hartford,	1874.	<i>Salem,</i>	1875.

See, also, Association of American Naturalists and Geologists.

AMERICAN INSTITUTE. NEW-YORK.

TRANSACTIONS OF THE AMERICAN INSTITUTE FOR THE YEARS
1863 to 1871. 9 vols. 8vo. New-York,

AMERICAN INSTITUTE OF MINING ENGINEERS. UNITED STATES.

TRANSACTIONS OF THE AMERICAN INSTITUTE OF MINING
Engineers.

Vol. I., May, 1871, to February, 1873; Vol. II., 1873, to
February, 1874. 2 vols. 8vo. Philadelphia.

AMERICAN IRON AND STEEL ASSOCIATION. PHILADELPHIA.

ANNUAL REPORT OF THE SECRETARY OF THE AMERICAN IRON
and Steel Association, for the year 1874.

8vo. pp. Philadelphia.

BULLETIN OF THE AMERICAN IRON AND STEEL ASSOCIATION.

Weekly. Philadelphia, 1866 to date.

Vol. I. to VIII., 1866 to 1874; Vol. IX., 1875, January to
June. 9 vols. 4to. Philadelphia.

AMERICAN MUSEUM OF NATURAL HISTORY. NEW-YORK.

FIRST ANNUAL REPORT for the year 1870.

Vol. XXV., Pamphlets. Octavo series.

8vo. 29 pp. 1870.

AMERICAN PUBLIC HEALTH ASSOCIATION. UNITED STATES.

PUBLIC HEALTH REPORTS AND PAPERS presented at the Meetings of the American Public Health Association. Vol. I., 1873.

8vo. New-York, 1875.

ASSOCIATION OF AMERICAN NATURALISTS AND GEOLOGISTS. UNITED STATES.

REPORTS, EMBRACING PROCEEDINGS AND TRANSACTIONS of the First and Second Meetings of the Association of American Naturalists and Geologists, held at Philadelphia, in 1840 and 1841; and of the Third Meeting, held at Boston in 1842.

8vo. Boston, 1843.

(These Reports have been continued under the title : Proceedings of the American Association for the Advancement of Science, *which see*.)

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

REPORT of the—

First Meeting held at Cambridge in 1831.	} Second edition.
Second " " Oxford, 1832.	
Third " " Cambridge, 1833.	<i>London</i> , 1835.
Fourth " " Edinburgh, 1834.	<i>London</i> , 1834.
Fifth " " Dublin, 1835.	" 1835.
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Twenty-third " " Hull, 1853.	" 1853.
Twenty-fourth " " Liverpool, 1854.	" 1854.
Twenty-fifth " " Glasgow, 1855.	" 1855.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF
SCIENCE.

REPORT of the—

Twenty-sixth Meeting held at

	Cheltenham,	1856.	<i>London</i> ,	1857.
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Fortieth	"	Liverpool,	"	1871.
Forty-first	"	Edinburgh,	"	1872.
40 vols. 8vo. London, 1832 to 1872.				

CHEMICAL SOCIETY. LONDON.

MEMOIRS AND PROCEEDINGS OF THE CHEMICAL SOCIETY OF
London.

Vols. I., II., III., 1841 to 1847.

3 vols. 8vo. London, 1841 to 1848.

THE QUARTERLY JOURNAL OF THE CHEMICAL SOCIETY OF
London.

Vols. I. to VI., 1848 to 1862.

New Series, (Monthly,) under the title:

THE JOURNAL OF THE CHEMICAL SOCIETY OF LONDON.

Vols. II., IV., VI., VII., VIII., XI., XII., 1863 to 1874.

Vol. XIII., 1875, January to June.

General Index (subjects and authors) to the First Twenty-Five Volumes of the Journal of the Chemical Society, 1848 to 1872; and to the Memoirs and Proceedings, 1841 to 1847. Compiled by Henry Watts.

8vo. 268 pp. London, 1874.

CONSERVATOIRE IMPERIAL DES ARTS ET METIERS.
PARIS.ANNALES DU CONSERVATOIRE IMPERIAL DES ARTS ET ME-
tiers.

Vol. VII., 1866 to 1867. VIII., 1870.

DEUTSCHEN CHEMISCHEN GESELLSCHAFT. BERLIN.

BERICHTE DER DEUTSCHEN CHEMISCHEN GESELLSCHAFT ZU
Berlin.

Vols. I. to VII., 1868 to 1874; Vol. VIII., 1875, Nos. 1 to 9, January 5 to May 24.

DEUTSCHEN GEOLOGISCHEN GESELLSCHAFT. BERLIN.
ZEITSCHRIFT DER DEUTSCHEN GEOLOGISCHEN GESELLSCHAFT
zu Berlin.

Vols. II., IX. to XXIII., and XXVI., 1849 to 1874.

DUDLEY OBSERVATORY. ALBANY.

ANNALS OF THE DUDLEY OBSERVATORY.

Vol. I., 1866.

EDINBURGH GEOLOGICAL SOCIETY.

TRANSACTIONS OF THE EDINBURGH GEOLOGICAL SOCIETY.

Vol. II., Part 3.

ESSEX INSTITUTE. SALEM, MASS.

BULLETIN OF THE ESSEX INSTITUTE.

Vol. I., Nos. 1, 2, 3, January, February, March, 1869.

PROCEEDINGS OF THE ESSEX INSTITUTE.

Vols. II., Part 1, 1856-1857; IV., 1864-1865; V., 1866-1867; VI., 1868.

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GEOLOGICAL SOCIETY. LONDON.

QUARTERLY JOURNAL of the Geological Society of London.

Vols. XXIII., XXIV., XXV., 1867, 1868, 1869; XXVII., XXVIII., XXIX., 1871, 1872, 1873; XXX., 1875, parts 1 and 2.

INSTITUT DE FRANCE. PARIS.

ACADEMIE DES SCIENCES. COMPTES-RENDUS hebdomadaires des séances de l'Académie des Sciences, publiés, conformément à une décision de l'Académie en date du 13 Juillet, 1835, par MM. les Secretaires perpétuels.

4to. Weekly. Two vols. a year. Paris, 1835 to date.

Tomes XVI. to LXXX., 1843 to 1875.

INSTITUTION OF CIVIL ENGINEERS. LONDON.

TRANSACTIONS OF THE INSTITUTION OF CIVIL ENGINEERS.
Vols. I., II., III., 1837 to 1842.

3 vols. 4to. London, 1842.

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JOURNAL OF THE IRON AND STEEL INSTITUTE.

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Vols LXV. to LXVIII., 1872, 1873.

Verzeichniss sammtlicher von der Kais. Akademie der Wissenschaften seit ihrer gründung bis letzten October, 1868. Veröffentlichten Druckschriften.

12mo. 300 pp. Vienna, 1869.

KAISERLICHEN KÖNIGLICHEN BERGAKADEMIE.

JAHRBUCH DER K. K. BERGAKADEMIEN LEOBEN UND SCHEMNITZ und der K. K. Montan-Lehranstalt Příbram.

Vol. XV., 1865. Edited by P. Ritter von Tunner.

8vo. Vienna, 1865.

KAISERLICHEN KÖNIGLICHEN GEOLOGISCHEN REICH-
SANSTALT. WIEN.

ABHANDLUNGEN DER KAISERLICHEN KÖNIGLICHEN GEOLOGISCHEN Reichsanstalt.

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JAHRBUCH DER KAISERLICHEN KÖNIGLICHEN GEOLOGISCHEN Reichsanstalt.

Vols. I.; III.; IX. to XXIV.; 1850 to 1874. 18 vols. Royal 8vo.

KAISERLICHEN KÖNIGLICHEN GEOLOGISCHEN REICH-SANSTALT. WIEN.

JAHRBUCH DER KAISERLICHEN KÖNIGLICHEN GEOLOGISCHEN Reichsanstalt.

General Index. Vol. I. for Vols. I. to X., 1850 to 1859; Vol. II. for Vols. XI. to XX., 1860 to 1870. 2 vols. Royal 8vo.

KATALOG DER BIBLIOTHEK DES K. K. HOF-MINERALIEN-Cabinetes in Wien. Zusammenestellt von Paul Partsch. 4to. Vienna, 1851.

MINERALOGISCHE MITTHEILUNGEN. Gesammelt von Gustav Tschermak und herausgegeben als beilage zu der Jahrbuch der K. K. Geologischen Reichsanstalt. 1871, 1872.

2 vols. 4to. Vienna, 1872, 1873.

VERHANDLUNGEN DER KAISERLICHEN KÖNIGLICHEN GEOLOGISCHEN Reichsanstalt.

1867, 1870, 1872, 1873, 1874.

General Index (subjects, authors, places and names of palæontological species) for Vols. I. to XX., 1850 to 1859.

KÖNIGLICHEN BAYERISCHEN AKADEMIE DER WISSENSCHAFTEN. MÜNCHEN.

ABHANDLUNGEN DER KÖNIGLICHEN BAYERISCHEN AKADEMIE der Wissenschaften. Mathematisch-Physikalischen Classe. Vols. VI.; VII., Parts 2, 3; VIII., IX., X., XI., Parts 1, 2, 3, 4, 1852 to 1873. 4to. Munich.

SITZUNGSBERICHTE DER MATHEMATISCH PHYSIKALISCHEN Classe der Wissenschaften.

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LYCEUM OF NATURAL HISTORY. NEW-YORK.

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8vo. 28 pp. New-York, 1837.

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THE GEOLOGIST ; a Popular Illustrated Monthly Magazine of Geology.

Edited by S. J. MACKIE. 8vo. Monthly. One vol. a year. London, 1858 to 1864.

1862, 1863, 1864. Continued under the title :

THE GEOLOGICAL MAGAZINE.

Edited by HENRY WOODWARD, Prof. JOHN MORRIS, and ROBERT ETHERIDGE. 8vo. Monthly. One vol. a year. London, 1864 to date.

First Series. Vols. IV. ; VI. to X., 1864 to 1873.

Second Series. Vol. I., 1874. Vol. II., 1875, January to June.

HARDWICKE'S SCIENCE GOSSIP. A Monthly Medium of Interchange and Gossip, for Students and Lovers of Nature.

4to. Monthly. One vol. a year. 1865 to date.

Vols. I. to X., 1865 to 1875.

THE INDUSTRIAL MONTHLY. *See* The Technologist or Industrial Monthly.

INDUSTRIE-BLÄTTER. Wochenschrift für Fortschritt und Aufklärung in Gewerbe, Hauswirtschaft, Gesundheitspflege.

Published by H. HAGER and T. JACOBSEN. 4to. Weekly. One vol. a year. Berlin, 1863, to date.

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IRON. The Journal of Science, Metals and Manufactures. With which is incorporated the Mechanics' Magazine, established 1823.

Folio. Weekly. Two vols. a year. London, 1873 to date.

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JAARBOEK VAN HET MIJNVESEN IN NEDERLANDSCH OOST-INDIE. 1872, Parts 1, 2, 1873, Part 1. 8vo. Amsterdam.

JAHRBUCH DER CHEMIE UND PHYSIK. *See* Journal für Chemie und Physik.

JAHRBUCH FÜR DEN BERG-UND HÜTTENMANN; *also*,

JAHRBUCH FÜR DEN BERG UND HÜTTENWESEN IM KÖNIGREICHE Sachsen. *See* Kalender für der Sächsische Berg-und Hüttenmann.

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AGRICULTURAL REPORTS. For the years 1850 to 1861.

12 vols. 8vo.

After 1861 the information contained in these reports was published by the Department of Agriculture under the title : Annual Reports of the Commissioner of the Department of Agriculture.

OFFICIAL GAZETTE of the United States Patent Office.

4to. Weekly. Two vols. a year. Washington, 1872 to date.

Vols. III. to VII., January, 1873, to June, 1875.

Index Volume. 1873; for Vols. III. and IV. of the Official Gazette, and Monthly Volumes, Jan. to Dec., 1873.

THE UNITED STATES SIGNAL OFFICE. WASHINGTON, D. C.

REPORT OF THE CHIEF SIGNAL OFFICER of the United States Signal Office for the year 1872.

8vo. 292 pp. Washington, 1872.

THE UNITED STATES NAVAL OBSERVATORY. WASHINGTON, D. C.

ASTRONOMICAL AND METEOROLOGICAL OBSERVATIONS made at the United States Naval Observatory. Published by authority of the Hon. Secretary of the Navy. Admiral B. F. Sands, Superintendent.

OBSERVATIONS FOR 1867. 4to. 487 pp. Washington, 1868.

APPENDIX 1. Harkness, William. Report on the Difference of Longitude between Washington and Havana, Cuba.
4to. 39 pp. Washington, 1868.

THE UNITED STATES NAVAL OBSERVATORY. WASHINGTON, D. C.:

PUJAZON, CECILIO. Observations to Determine the Error of Chronometer Frodsham, No. 2,816, made at Havana, Cuba. 4to. 14 pp. Washington, 1868.

APPENDIX 2. Reports of Observations of the Total Eclipse of the Sun, August 7, 1869.

4to. 218 pp., XII. plates. Washington, 1868.

APPENDIX 3. Newcomb, Simeon. Positions of Fundamental Stars deduced from Observations made at the U. S. Naval Observatory, between the years 1862 and 1867.

4to. 38 pp. Washington, 1868.

OBSERVATIONS FOR 1868.

APPENDIX 1. Gilliss, J. M. A Catalogue of 1,963 Stars Reduced to the Beginning of the Year 1850, together with a Catalogue of 290 Double Stars.

4to. 73 pp. Washington, 1870.

OBSERVATIONS FOR 1869.

APPENDIX 2. Coffin, *Prof.*, and *Lieuts.* Page and Steedman. Zones of Stars observed at the U. S. Naval Observatory, in the years 1846, 1847, 1848 and 1849.

4to. 331 pp. Washington, 1872.

OBSERVATIONS FOR 1870.

APPENDIX 1. Harkness, W. R. Report on the Difference of Longitude between Washington and St. Louis.

4to. 39 pp. Washington, 1872.

APPENDIX 2. Hall, A., and Harkness, W. R. Reports on Observations of Encke's Comet during its Return in 1871.

4to. 49 pp. Washington, 1872.

APPENDIX 3. Newcomb, Simeon. On the Right Ascensions of the Equatorial Fundamental Stars and the Corrections Necessary to Reduce the Right Ascensions of Different Catalogues to a Mean Homogeneous System.

4to. 73 pp. Washington, 1872.

OBSERVATIONS FOR 1871.

APPENDIX 2. Yarnal, *Prof.* Results of Observations made at the U. S. Naval Observatory with the Transit Instrument and Mural Circle, in the years 1853 to 1860, inclusive.

8vo. 144 pp. Washington, 1872.

OBSERVATIONS FOR 1872.

4to. Washington, 1872.

APPENDIX 1. Eastman, John R. Tables of Instrumental Constants and Corrections for the reduction of Transit Observations.

45 pp.

APPENDIX 2. Report on the Difference of Longitude between Washington and Detroit, Mich.; Carlin, Nevada, and Austin, Nevada.

CONNECTICUT.

THE CONNECTICUT BOARD OF AGRICULTURE. HARTFORD.

ANNUAL REPORT of the Connecticut Board of Agriculture for
the year 1868. 8vo. Hartford, 1868.

MASSACHUSETTS.

THE MASSACHUSETTS BOARD OF AGRICULTURE. BOSTON.

ANNUAL REPORT of the State Board of Agriculture.
Fourth to the Eighth Annual Reports, for the years 1856
to 1860. 5 vols. 8vo. Boston, 1857 to 1861.

NEVADA.

THE STATE MINERALOGIST. CARSON CITY.

ANNUAL REPORT of the State Mineralogist for the year 1867.
8vo. 151 pp. Carson City, 1867.

THE SURVEYOR-GENERAL. CARSON CITY.

ANNUAL REPORT of the Surveyor-General for the years 1865,
1866. 2 vols. 8vo. Carson City, 1866, 1867.

NEW-YORK.

THE STATE ENGINEER AND SURVEYOR. ALBANY.

ANNUAL REPORT of the State Engineer and Surveyor on the
Rail-Road Statistics of the State of New-York for the
years 1853, 1863. 2 vols. 8vo. Albany.

NEW-YORK CITY.

THE CROTON AQUEDUCT DEPARTMENT.

ANNUAL REPORT of the Croton Aqueduct Department, made
to the Common Council of the City of New-York.
Twentieth and Twenty-First Reports for the years 1867,
and 1868. 2 vols. 8vo. New-York, 1868, 1869.

THE METROPOLITAN BOARD OF HEALTH.

ANNUAL REPORT of the Metropolitan Board of Health of the
State of New-York.
1866 to 1872. 7 vols. 8vo. New-York.

OHIO.

ANNUAL REPORT OF THE OHIO STATE BOARD OF Agriculture, to the General Assembly of Ohio, with an Abstract of the Proceedings of the County Agricultural Societies.

Reports for the years 1855, 1856, 1858 to 1866 ; 1868, 1869.
13 vols. 8vo. Columbus.

BELGIUM.

ANNALES DES TRAVAUX PUBLICS DE BELGIQUE.

Vols. XI. to XXVII., (atlas to accompany Vol. XV.,) 1852 to 1869.

GREAT BRITAIN AND IRELAND.

BRITISH PATENT OFFICE. LONDON.

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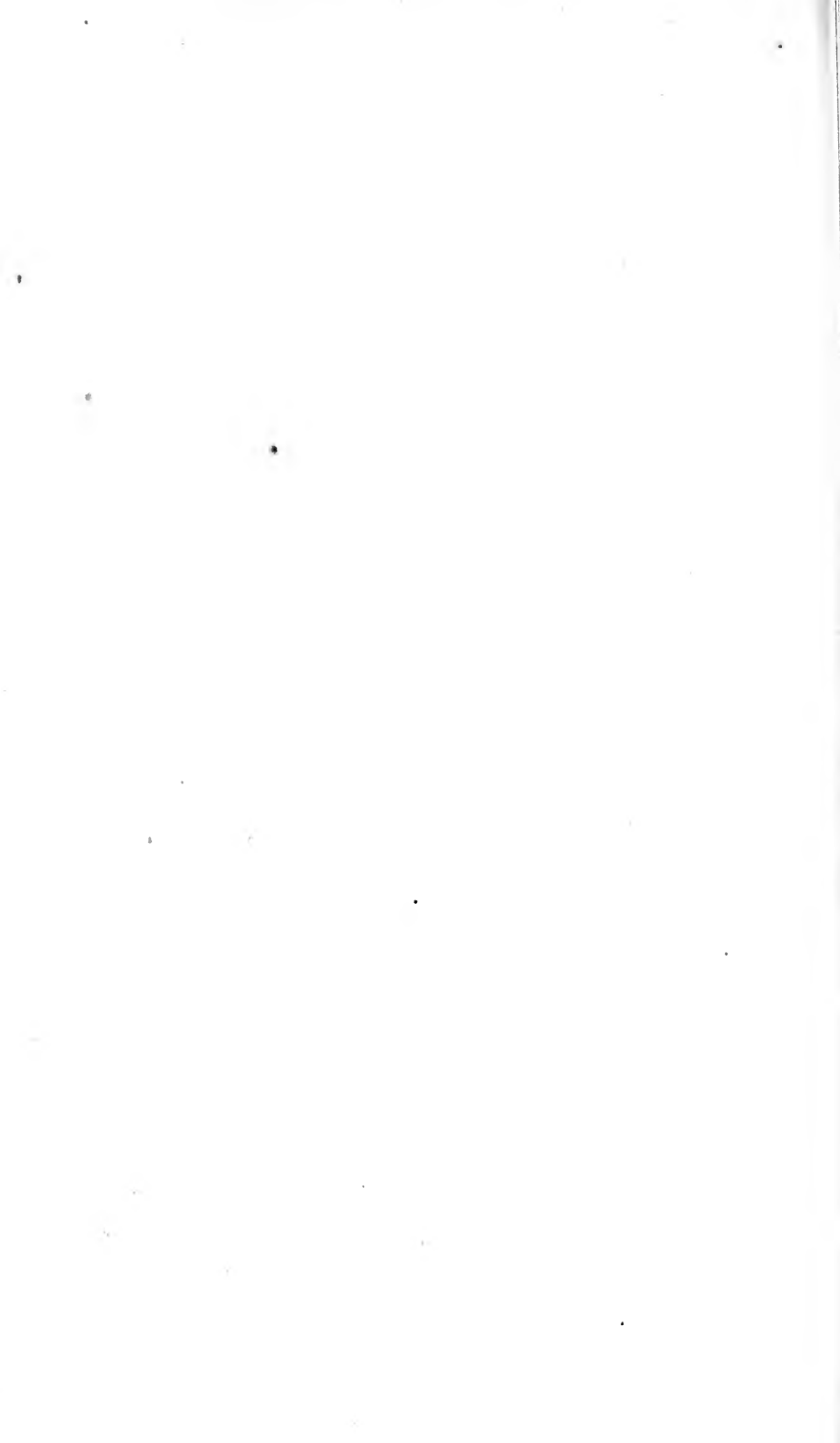
THE COMMISSIONER of Patents' Journal.

1872, 1873, 1874. 3 vols. 4to. London.

METEOROLOGICAL OFFICE. LONDON.

QUARTERLY WEATHER REPORT of the Meteorological Office,
London.

1872, part 4. 4to. London.



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EXHIBITION OF THE INDUSTRY OF ALL NATIONS, LONDON, 1851.

EXPOSITION DU HAVRE, 1868.

EXPOSITION UNIVERSELLE DE PARIS, 1867.

INTERNATIONAL EXHIBITION, LONDON, 1862.

WIENER WELTAUSSTELLUNG, 1873.

STATISTICS.

VOYAGES AND TRAVELS.

WORKS OF GENERAL REFERENCE.

MISCELLANEOUS.

PURE MATHEMATICS.

ARITHMETIC.

- BAILY, F., and Filipowski, H. The Doctrine of Interest Annuities and Assurances. 2 vols. 8vo. London, 1864, 1866.
- BERTRAND, Joseph. *Traité d'Arithmétique*. 12mo. 254 pp. Paris, 1849.
- CRELLE, A. L. *Rechentafeln welche alles Multipliciren und Dividiren mit Zahlen unter Tausend. Mit einen vorworte von Dr. C. Bremiker.* 4to. 1000 pp. Berlin, 1869.
- DAVIES, Charles. *University Arithmetic*. 12mo. 466 pp. New-York, 1873.
- and Peck, Wm. G. *Mathematical Dictionary and Cyclo-pedia of Mathematical Science*. 8vo. 592 pp. New-York, 1872.
- FAIRBANKS, Lorenzo. *A Complete System of Practical Bookkeeping, by Double Entry*. 8vo. 189 pp. Boston, 1851.
- GOTTSCHALK, C. G. *Die Grundlagen des Rechnungswesens*. 8vo. 465 pp. Leipsig, 1865.
- JOUE, C. J. *Compositions de Mathématique et de Physique*. 8vo. 295 pp. Paris, 1855.
- LÜBSEN, H. B. *Ausfuhrliches Lehrbuch der Arithmetik und Algebra*. 8vo. 254 pp. Hamburg, 1853.
- SERRET, J. A. *Traité d'Arithmétique*. 8vo. 408 pp. Paris, 1852.

WEIGHTS, MEASURES AND COINS.

- ADAMS, John Quincy. *Report of the Secretary of State upon Weights and Measures*. 8vo. 245 pp. Washington, 1821.
- BARNARD, F. A. P. *The Metric System of Weights and Measures. From the Proceedings of the University Convocation held at Albany, N. Y., August, 1871.* 8vo. 106 pp.
- *The Metric System of Weights and Measures*. 8vo. 194 pp. New-York, 1872.

- BARNARD, F. A. P. Report on the Principles which should Govern the Tolerance of Deviations from Standard Weight of Coin Weighed in Parcels; made to the Secretary of the Treasury of the United States, at the request of the Commission of 1872, for the Scrutiny of the Coinage. 8vo. Washington, 1872.
- DAVIES, Charles. Reports of the Committee of the Convocation of the University of the State of New-York on the Metric System. Vol. I., Pamphlets. Duodecimo series. 12mo. 76 pp. New-York, 1873.
- The Metric System, explained and adapted to the Systems of Instruction in the United States. Vol. I., Pamphlets. Duodecimo series. 12mo. 20 pp. New-York, 1867.
- EGLESTON, T. Tables of Weights, Measures and Coins. 32mo. 36 pp. New-York, 1868.
- EXPOSITION Universelle de Paris, 1867.
- Rapports du Comité des Poids et Mesures et de Monnaies de L'Exposition de 1867. 12mo. 153 pp. Paris, 1867.
- INSTRUCTION Abrégée sur les Mesures. Deduites de la grandeur de la Terre uniforme pour toute la Republique, et sur les Calculs relatif à leur division décimale. Par la Commission temporaire des Poids et Mesures republicaines. 8vo. 173 pp. Paris, 1794.
- JOHNSON, Pres. Andrew. A Message Concerning the International Monetary Conference held at Paris in June, 1867. 8vo. 110 pp. Washington, 1867.
- KELLY, P. The Universal Cambist and Commercial Instructor. Second edition. 2 vols. 4to. London, 1821.
- MANN, W. W. A New System of Weights, Measures and Money, entitled the Linn-Base Decimal System; and designed for the Adoption of all Nations as the One Common System. Vol. I., Pamphlets. Duodecimo series. 12mo. 22 pp. New-York, 1871.
- MÉCHAIN, P. F. A., and Delambre, J. B. J. Base du Système Métrique Décimal ou Mesure de L'Arc du Meridien compris entre les paralleles de Dunkerque et Barcelone, executée en 1792 et années suivantes. 3 vols. 4to. Paris, 1806, 1807-1810.
- SCHÖDL, Franz. Handbuch ausführliche metrischen Tabellen. 8vo. 108 pp. Vienna, 1870.
- SUMNER, Charles. The Metric System of Weights and Measures. A Speech delivered in the Senate of the United States, July 17, 1866. Vol. I., Pamphlets. Octavo series. 8vo. 7 pp. Boston, 1866.
- WESTENDORF, Karl. Die Bestimmung für Annahme eine Normalmusse und eine Normalstantsche. 4to. Vienna, 1873.

PERIODICAL PUBLICATIONS.

JOURNAL de Mathematiques pures et Appliquées.

Published by JOSEPH LIOUVILLE, 1836 to 1874; by H. RESAL, 1875. 4to. Monthly. Paris.

Deuxième Série. (1856 to 1874.)

Tomes XIV. to XIX., 1869 to 1874.

Troisième Série.

Tome I., January to July, 1875.

ANALYSIS.

- BACKLUND, A. V. Nagro satser om plana algebraiska Kurvors Normaler. Vol. X., Pamphlets. Quarto series. 4to. 38 pp.
- BELANGER, J. B. Résumé des Leçons de Geometrie Analytique et de Calcul Infinitesimal. 12mo. 295 pp. Paris, 1859.
- BERTRAND, Joseph. Traité Élémentaire d'Algèbre. 12mo. 560 pp. Paris, 1851.
- DAVIES, Charles. Elements of Algebra, on the Basis of M. Bourdon, embracing Sturm's and Horner's Theorems; and practical examples. 8vo. 400 pp. New-York, 1872.
- Elements of Analytical Geometry, and of the Differential and Integral Calculus. 8vo. 204 pp. New-York, 1859.
- Elements of Analytical Geometry. 8vo. 204 pp. New-York, 1872.
- DAVIS, John E. On Potentials and their Application to Physical Science. Vol. I., Pamphlets. Octavo series. 8vo. 10 pp.
- DUHAMEL, J. M. C. Elémens de Calcul Infinitesimal. 2 vols. 8vo. Paris, 1856.
- EULER, Leonard. Élemens D'Algèbre. Traduit de L'Allemand, revue et augmentée de notes. 2 vols. 12mo. Paris, 1807.
- HAGEN, G. Grundzüge der Wahrscheinlichkeits-Rechnung. 12mo. 198 pp. Berlin, 1837.
- HILL, C. J. Sur une forme générale de developpement et sur les Integrales définies. Vol. X., Pamphlets. Quarto series. 4to. 36 pp.
- LÜTSEN, H. B. Ausführliches Lehrbuch der Arithmetik und Algebra. 8vo. 254 pp. Hamburg, 1853.
- Einleitung in die Infinitesimal Rechnung. 8vo. 183 pp. Hamburg, 1855.
- NAVIER, Louis. Résumé des Leçons d'Analyse. 2 vols. 8vo. Paris, 1856.
- PECK, W. G. A Practical Treatise on the Differential and Integral Calculus, with some of its applications to Mechanics and Astronomy. 12mo. 208 pp. New-York, 1873.
- A Treatise on Analytical Geometry. 12mo. 212 pp. New-York, 1874.
- RITT, G. Problèmes D'Algèbre. Fourth edition. 8vo. 396 pp. Paris, 1856.
- Problèmes D'Application de L'Algèbre à la Géométrie. Fourth edition. 8vo. Paris, 1857.

- ROGUET, Ch. *Leçons de Géométrie Analytique.*
12mo. 479 pp. Paris, 1854.
- TODHUNTER, J. *Algebra for the Use of Colleges and Schools, with numerous examples.* Sixth edition. Revised.
12mo. 608 pp. London, 1873.
- YOUNG, J. R. *The Elements of Integral Calculus, with its Applications to Geometry, and to the Summation of Infinite Series.* Revised and Corrected by Michael O'Shannessy, A. M.
8vo. 292 pp. Philadelphia, 1833.
- ZEIPEL, Victor von. *Om Monomial-och Fakultetskoefficienter.*
Vol. X., Pamphlets. Quarto series. 4to. 57 pp.

PERIODICAL PUBLICATIONS.

- JOURNAL de Mathematiques pures et Appliquées.
Published by JOSEPH LIOUVILLE, 1836 to 1874; by H. RESAL, 1875. 4to. Monthly.
Paris.
- Deuxième Série. (1856 to 1874.)
Tomes XIV. to XIX., 1869 to 1874.
- Troisième Série.
Tome I., January to July, 1875.

GEOMETRY.

- BLANCHET, A. *Éléments de Géométrie, par A. M. Legendre.*
8vo. 280 pp. Paris, 1859.
- HONIG, J. *Anleitung zum Studium der Darstellende Geometrie.*
2 vols., text and plates. Vienna, 1845.
- LAW, Henry. *The Elements of Euclid, with many additional propositions and explanatory notes; to which is prefixed an Introductory Essay on Logic.*
12mo. 348 pp. London, 1870.
- LEGENDRE, Adrien Marie. *Éléments de Géométrie, avec additions et modifications par A. Blanchet.* 8vo. 280 pp. Paris, 1859.
- LÜBSEN, H. B. *Ausführliches Lehrbuch der Höhre Geometrie.*
8vo. 214 pp. Leipsig, 1845.
- RITT, G. *Problèmes de Géométrie.* Fourth edition.
8vo. 332 pp. Paris, 1857.
- SCHRÖN, Ludwig. *Seven figure Logarithms.* Fifth edition, with a description of the tables added by A. De Morgan.
8vo. 550 pp. London, 1865.

GENERAL REFERENCE AND TABLES.

- CALLET, F. *Tables Portraitives de Logarithmes, revues et corrigées, par M. Saigey.* 8vo. 680 pp. Paris, 1795.
- DAVIES, Charles, and Peck, Wm. G. *Mathematical Dictionary and Cyclopedia of Mathematical Science.*
8vo. 592 pp. New-York, 1872.

- GAUSS, F. G. Fünfstellige vollständige Logarithmische und Trigonometrische Tafeln. Third edition.
8vo. 141, 43 pp. Berlin, 1873.
- Vierstellige Logarithmisch-Trigonometrische Handtafel.
5 Tables. Berlin, 1870.
- A Treatise on Logarithms and Trigonometrical and other Mathematical Tables. 16mo. 327 pp. London, 1867.

APPLIED GEOMETRY.

- ADHÉMAR, J. Traité de la Coupe des Pierres. Sixième edition.
8vo. 540 pp. text; Atlas folio, LXXXVI. plates. Paris, 1859.
- Traité de Perspective. 2 vols. text and atlas. Paris, 1859.
- BAUERNFEIND, C. M. Elemente der Vermessungskunde.
8vo. 878 pp. Stuttgart, 1869.
- Elemente der Vermessungskunde.
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- BOBERT, C. W. Der geschwinde und richtig rechnende Markscheider.
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- BORCHERS, E. Die Practische Markscheidekunst.
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- BOSSUET, F. Traité de Perspective Linéaire.
Vol. I. 8vo. 160 pp. text; Atlas, XXVIII. plates. Brussels.
- BRETON, De Champ P. Traité du Nivellement Comprennant la Theoretique et la Pratique du Nivellement Ordinaire et des Nivellements Expéditifs.
8vo. 299 pp. Paris, 1848.
- CALLET, F. Tables Portraitives de Logarithmes, revues et corrigées, par M. Saigey.
8vo. 680 pp. Paris, 1795.
- CARNOT, L. N. M. Mémoire sur la Relation qui existe entre les distances de cinq points quelconques pris dans l'espace, suivi d'un essai sur la Théorie des Transversales.
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- COLVIN, Verplanck. Report on a Topographical Survey of the Adirondack Wilderness of New-York.
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- DAVIES, Charles. Report to the Secretary of the Treasury in relation to the Various Proposed Lines for Interoceanic Canals and Rail-Roads between the Waters of the Atlantic and Pacific Oceans. 8vo. 28 pp., XIII. maps. Washington, 1866.
- The Elements of Surveying and Leveling.
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- and Peck, Wm. G. Mathematical Dictionary and Cyclo-pedia of Mathematical Science.
8vo. 592 pp. New-York, 1872.
- DREW, W. H. A Treatise on Conic Sections.
12mo. 128 pp. London, 1864.
- ELSCHING, A. Kurzgefasste Anleitung zu barometrischen Nivellirungen mit barometeren. 8vo. 72 pp. Salsburg, 1809.
- ENGELBREIT, K. Die Instrumente der höheren und niederen Geodäsie und der Hydrometrie.
2 vols., text and plates. Nuremberg, 1852.

- EWING, Alexander. A Synopsis of Practical Mathematics.
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- FAYE, H. A. E. Sur la situation actuelle du Bureau des Longitudes.
Vol. X., Pamphlets. Quarto series, 4to. 8 pp. 1872.
- FREEDEN, W. v. Die Praxis der Methode der Kleinsten Quadrate
für die Bedürfnisse der Anfänger. Vol. I., Pamphlets. Octavo series.
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- GAUSS, F. G. Fünfstellige vollständige Logarithmische und Tri-
gonometrische Tafeln. Third edition.
8vo. 141, 43 pp. Berlin, 1873.
- Vierstellige Logarithmisch-Trigonometrische Handtafel.
5 Tables. Berlin, 1870.
- GERLING, C. L. Die Ausgleichungs-Rechnungen der practischen
Geometrie oder Methode der Kleinsten Quadrate.
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- GIBSON, R. The Theory and Practice of Surveying.
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- GILLESPIE, W. M. A Treatise on Land Surveying.
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- A Treatise on Levelling Topography and Higher Surveying.
Edited by Cady Staley. 8vo. 171 pp. New-York, 1870.
- HARRISON, A. M. A Treatise on the Plane Table and its Use in
Topographical Survey. *From the Coast Survey Report for*
1865. 4to. 29 pp., II. plates. Washington, 1865.
- HARTNER, Friederich. Handbuch der niederen Geodäsie, nebst einem
Anhang über die Elemente der Markscheidekunst.
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- HERRMANN, Friederich. Katechismus der Feldmess Kunst mit
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- HERZOG, Edmund. Praktische Anleitung zum Höhenmessen mit-
telst Dosenbarometer, (Barometre aneroïde u. Barometre
holosterique,) nebst Bemerkungen über generale Tracirung.
Vol. II., Pamphlets. Duodecimo series. 12mo. 30 pp. Leipzig, 1873.
- HEUSSIE, Jacob. Lehrbuch der Geodäsie.
8vo. 583 pp. London, 1861.
- HOLTSCHL, Josef. Das Höhenmessen mit Metall-Barometern.
8vo. 74 pp. Vienna, 1870.
- HUGO, Leopold. Essai sur le Geometrie des Cristalloïdes.
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- Introduction à la Geométrie Descriptive. Des Cristalloïdes.
Vol. I., Pamphlets. Octavo series.
8vo. 19 pp., III. plates. Paris, 1874.
- Les Cristalloïdes à Directrice Circulaire.
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- Les Cristalloïdes Complexes à Summit Étoile. Vol. I., Pam-
phlets. Octavo series. 8vo. 24 pp., III. plates. Paris, 1872.
- Theorie des Cristalloïdes Elementaires.
8vo. 58 pp., IV. plates. Paris, 1867.

- JAQUET, A. Trace General des Courbes.
8vo. 250 pp. Paris, 1858.
- LAUR, J. A. Vereinfachte und vervollkommende practische Geodäsie.
2 vols. 8vo. Leipzig, 1857.
- LEE, Thomas J. Tables and Formulæ useful in Surveying, Geodesy and Practical Astronomy, including Elements for the Projection of Maps, and Instruction for Field Magnetic Surveying. Third edition. *Prof. Pap. Corp. of Eng. U. S. A.*, No. 12.
8vo. 310 pp. Washington, 1873.
- LEO, E. J. Theoretische-practische Anleitung zum Nivelliren.
4to. 136 pp. Weimar, 1846.
- LEROY, C. F. A. Géométrie Descriptive.
2 vols. 4to. text and plates. Paris, 1855.
- Traité de Stéréotomy.
2 vols. 4to. text and plates. Paris, 1844.
- LESCHNER, C. F. Tafeln zu Aufsuchung der Seigerteufen und Sohlen der Flachenschnüre bei dem Markscheiden.
4to. 30 pp. Freiberg, 1842.
- MARLETTE, S. H. Report of the Surveyor-General of the State of Nevada for the years 1865 and 1866.
2 vols. 8vo. 83, 95 pp. Carson City, 1866, 1867.
- MERRETT, H. S. A Practical Treatise on the Science of Land and Engineering Surveying, Levelling, Estimating Quantities, &c. With a General Description of the Several Instruments Required for Surveying, Levelling, Plotting, &c.
8vo. 317 pp., XLI. plates. London, 1863.
- MILLER, Huaenfels A. von. Höhre Markscheidekunst.
8vo. 291 pp. Vienna, 1868.
- OLIVIER, Théodore. Compléments de Géométrie Descriptive.
8vo. text, 4to. plates. Paris, 1848.
- Cours de Géométrie Descriptive.
2 vols. 4to. text and plates. Paris, 1847–1852.
- Développements de Géométrie Descriptive.
8vo. text, 4to. plates. Paris, 1843.
- Applications de la Géométrie Descriptive aux ombres, à la Perspective, à la Gnomique et aux Engrenages.
8vo. text, 4to. plates. Paris, 1847.
- Mémoires de Géométrie. Descriptive, Theoretique et Appliquée.
8vo. text, 4to. plates. Paris, 1852.
- PLANE Table, (The,) and its Use in Topographical Surveying.
Vol. I., Pamphlets. Quarto series.
8vo. 79 pp., V. plates. New-York, 1869.
- PUISSANT, L. Traité de Geodesie, ou Exposition des Methodes Astronomiques et Trigonometriques, Appliquées à la mesure de la Terre, soit à la confection du canevas des Cartes et des Plans. 4to. 318 pp., XVI. tables, X. plates. Paris, 1865.
- Traité de Topographie, D'Arpentage et de Nivellement.
4to. 429 pp. Paris, 1807.
- SALNEUVE, J. F. Cours de Topographie et de Geodesie.
8vo. 663 pp. Paris, 1857.

- SCHLOMILCH, Oskar. Grundzüge einer Wissenschaftlichen Darstellung der Geometrie des Maasses. 8vo. 256 pp. Eisenach, 1854.
- SCHNEITLER, C. F. Die Instrumente und Werkzeuge der höheren und niederen Messkunst. 8vo. 393 pp. Leipzig, 1861.
- Lehrbuch der gesammten Messkunst. 8vo. 374 pp. Leipzig, 1851.
- SCHÖDEL, H. Hülfsstafel zur barometrischen Höhenbestimmung nebst Anleitung zur Untersuchung und zum Gebrauch der Federbarometer. Zweite verbesserte Auflage. 8vo. Stuttgart, 1874.
- SERRET, J. A. Traité de Trigonometrie. 8vo. 116 pp. Paris, 1852.
- SMITHSONIAN Institution Publications :
 ——— Circular Relative to Heights. 8vo. Washington, 1874.
- TRIPON, J. B. Études de Projections D'Ombres et de Lavis à l'usage de toutes les Écoles des Architectes et de Mécaniciens. 2 vols. 8vo. text and plates. Paris, 1848.
- UNITED STATES Coast Survey. A. D. Bache, LL. D., Superintendent. Annual Report of the Superintendent of the Coast Survey, showing the Progress of the Survey during the years 1852, 1853, 1854, 1856 to 1863 and 1865. 12 vols. 4to. Washington, 1853–1867.
- Appendices to above. Appendix IX. Schott, C. A. Determination of Time, by means of the Transit Instrument. *U. S. Coast Survey Manual*. 4to. 17 pp., I. plate. Washington.
- Appendix X. Schott, C. A. Determination of the Astronomical Latitude of a Station, by means of the Zenith Telescope. *U. S. Coast Survey Manual*. 4to. 14 pp., I. plate. Washington.
- Appendix XI. Schott, C. A. Determination of the Astronomical Azimuth of a Direction. *U. S. Coast Survey Manual*.
- Addenda to Appendices X. and XI. 4to. 12 pp. Washington.
- Appendix XVI. Pierce, Prof. Benjamin. Report on the Determination of the Longitude of America and Europe, from the Solar Eclipse of July 28, 1851. 4to. 79 pp. Washington.
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UNITED STATES Geological Survey of the Territories. Hayden, F. V., Director.

Miscellaneous Publications. No. 1. Gannett, Henry. List of Elevations in that portion of the United States west of the Mississippi River. Pamphlet. 8vo. Washington, 1873.

WATSON, Winslow C. A Supplement to the Report on the Survey of Essex County, N. Y. 8vo. 39 pp. Albany, 1853.

PERIODICAL PUBLICATIONS.

JOURNAL de Mathematiques pures et Appliquées.

Published by JOSEPH LIOUVILLE, 1836 to 1874; by H. RESAL, 1875. 4to. Monthly. Paris.

Deuxième Série. (1856 to 1874.)

Tomes XIV. to XIX., 1869 to 1874.

Troisième Série.

Tome I., January to July, 1875.

RATIONAL MECHANICS.

- APPLETON, D. & Co.'s Dictionary of Machines, Mechanics, Engine Work and Engineering. 2 vols. 8vo. New-York, 1852.
- CALLON, J. Cours professés a L'École des Mines de Paris. Première Partie. Cours de Machines. Tome I., Text and Atlas. 8vo. text; 4to. Atlas. Paris, 1873.
- DANA, J. D. On Certain Laws of Cohesive Attraction. 8vo. 21 pp. 1847.
- DELAUNAY, Ch. Traité de Mécanique Rationnelle. 8vo. 619 pp. Paris, 1856.
- DESCHANEL, A. Privat. Elementary Treatise on Natural Philosophy. Translated and edited, with extensive additions, by J. D. Everett. Part I., Mechanics, Hydrostatics and Pneumatics. 8vo. London and New-York, 1871.
- FARADAY, Michael. On the Existence of a Limit to Vaporization. Vol. I., Pamphlets. Quarto series. 4to. 9 pp. London, 1827.
- HANDL, Alois, and Weiss, Adolph. Untersuchungen über den Zusammenhang in den Änderungen der dichten und brechungsexponenten in gemengen von Flüssigkeiten und Verbindungen von Gasen. Vol. V., Pamphlets. Octavo series. 8vo. 5 pp., I. plate. Vienna, 1858.
- HARDER, P. E. Das Molekellärgesetz mit besonder Anwendung auf das Wasser, den Wasserdampf und die Luft. 8vo. 168 pp. Hamburg, 1866.
- HATON DE LA GOUPILLIÈRE, J. N. Traité de Mécanismes. 8vo. 483 pp. Paris, 1834.
- JULLIEN, P. M. Problèmes de Mécanique Rationnelle. 2 vols. 8vo. Paris, 1855.
- MARRAT, W. Introduction to the Theory and Practice of Mechanics. 8vo. 455 pp. Boston, 1810.
- MEIER, L. Lehrbuch der höheren Mechanik. 8vo. 459 pp. Hanover, 1858.
- MOSELY, H. Mechanical Principles of Engineering and Architecture, with additions by D. H. Mahan, LL. D. 8vo. 699 pp. New-York, 1806.
- PECK, Wm. G. Elementary Treatise on Mechanics. 8vo. 296 pp. New-York, 1872.
- POISSON, S. D. Traité de Mécanique. Second edition. 2 vols. 8vo. Paris, 1833.
- REDTENBACHER, Jacob Ferdinand. Principien der Mechanik und des Maschinenbaues. 8vo. 317 pp. Manheim, 1859.
- SCHOTTER, Hermann. Über die Rationelle Benutzung der Wasserkräfte vermittelt eines neuen apparatus zur transmission derselben. Vol. IV., Pamphlets. Octavo series. 8vo. 28 pp., I. plate. Gera, 1873.
- STEPHENSON, R. Report on Atmospheric Pressure. 4to. 44 pp., XXV. plates. London, 1844.

- TREADWELL, Daniel. On the Measure of the Forces of Bodies Moving with Different Velocities. Vol. V., Pamphlets. Octavo series. 8vo. 20 pp. Cambridge, 1861.
- VINTON, Francis L. Lectures on Machines—Theory of Construction and Calculation of their Effect, delivered at the School of Mines. Lithographed from notes taken by August Van Cleef. 4to. 94 pp. New-York, 1869.
- WEISBACH, Julius. A Manual of the Mechanics of Engineering. Translated from the Fourth German Edition by Eckley B. Coxe. Vol. I. Theoretical Mechanics. 8vo. 1112 pp. New-York, 1872.
- Lehrbuch der Ingenieur-und Maschinen-Mechanik. Fünfte verbesserte und vervollständigte Auflage. Vol. I. 8vo. 1301 pp. Brunswick, 1870–1875.
- Lehrbuch der Theoretischen Mechanik. 3 vols. 8vo. Brunswick, 1855, 1863, 1865.
- Appendix. 8vo. 43 pp. Brunswick, 1860.
- WILLIS, Robert. Principles of Mechanism, designed for the Use of Students in the Universities, and for Engineering Students generally. 8vo. 446 pp. London, 1841.

ASTRONOMY.

- ALEXANDER, Stephen. Observation of the Annular Eclipse of May 26, in the suburbs of Ogdensburg, New-York. Vol. IV., Pamphlets. Quarto series. 4to. 11 pp., I. plate. New-York.
- ANDERSON, F. Bestämning af Planeten (92) Udenas bana, grundad på observationer under trenne oppositioner. Vol. IV., Pamphlets. Quarto series. 4to. 22 pp. 1870.
- ARAGO, François. *Astronomie Populaire*. 2 vols. 8vo. Paris, 1854.
- Popular Lectures on Astronomy. With Additions by Dionysius Lardner. Vol. VI., Pamphlets. Octavo series. 8vo. 95 pp. New-York, 1848.
- ARGELANDER, Fr. *Neue Uranometrie*. 8vo. 119 pp.; Atlas, XVII. plates. Berlin, 1843.
- BRUHNS, B. Bestimmung der Langendifferenz zwischen Berlin und Lund auf telegraphischen Wege ausgeführt von dem Central bureau der Europäischen Gradmessung und der Sternwarte in Lund im Jahre, 1868. Vol. IV. Quarto series. 4to. 51 pp. Lunds, 1870.
- BRUNNOW, F. Tables of Victoria, computed with regard to the perturbations of Jupiter and Saturn. 4to. 17 tables. New-York, 1859.
- CATALOGUE of the Library of the U. S. Naval Observatory, Washington, D. C. 4to. 24 pp. Washington, 1868.
- COMET, The Great, of 1861. Vol. V., Pamphlets. Octavo series. 8vo. 9 pp. New-Haven, 1861.
- GOULD, Augustus A. *See* Dewey, Chester.
- B. A. Reduction of the Observations of the Fixed Stars, made by Joseph Le Paute d'Agelet at Paris during the years 1783–1785, with a Catalogue of the Corresponding Mean Places referred to the Equinox of 1800. 4to. 261 pp.
- GUILLEMIN, Amedée. *The Heavens. An Illustrated Hand-book of Popular Astronomy*. Edited by Norman Lockyer. Fourth edition, revised by R. A. Proctor. *American reprint*. 8vo. 432 pp. New-York, 1871.
- INSTRUCTIONS for Observing the Transit of Venus. Vol. IV., Pamphlets. Quarto series. 4to. 28 pp. Washington, 1874.
- JAHN, G. A. *Katechismus der Astronomie*. 16mo. 191 pp. Leipsig, 1869.
- KAMPF, F., and Clark, J. H. Report upon the Determination of the Astronomical Co-Ordinates of the Primary Stations at Cheyenne, Wyoming Territory, and Colorado Springs, Colorado Territory, made during the years 1872 and 1873. 4to. 82 pp. Washington, 1874.
- LARDNER, D. *Handbook of Natural Philosophy and Astronomy*. 12mo. 451 pp. Philadelphia, 1857.

- LEE, Thomas J. Tables and Formulæ useful in Surveying, Geodesy and Practical Astronomy, including Elements for the Projection of Maps, and Instruction for Field Magnetic Surveying. Third edition. *Prof. Pap. Corp. of Eng. U. S. A.*, No. 12. 8vo. 310 pp. Washington, 1873.
- LOOMIS, Elias. The Aurora Borealis, or Polar Lights; its phenomena and laws. Vol. VI., Pamphlets. Octavo series. 8vo. 41 pp.
- MÖLLER, Axel. Planet och Komet-Observationer, anställda år 1869, på Lunds Observatorium. Vol. IV., Pamphlets. Quarto series. 4to. 100 pp. Lunds, 1869.
- Planet och Komet-Observationer, anställda år 1870, på Lunds Observatorium. Vol. IV., Pamphlets. Quarto series. 4to. 74 pp. London, 1871.
- NEWTON, H. A. On Shooting Stars. 4to. 22 pp.
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- PROCTOR, Richard A. Transits of Venus. A Popular Account of Past and Coming Transits, from the first observed by Horrocks, A. D. 1839, to the transit of A. D. 2012. 8vo. 232 pp. New-York, 1875.
- RAMBOSSON, J. Astronomy. Translated by C. B. Pitman. 8vo. 385 pp. New-York, 1874.
- RAMMELSBERG, Karl Friederich. Ueber einigen nordamerikanischen Meteoriten. 8vo. 5 pp. 1861.
- SCHOEDLER Friederich. Das Buch der Natur, die Lehren der Physik, Astronomie, Chemie, Mineralogie, Geologie, Botanik, Zoologie und Physiologie. 8vo. 614 pp. Brunswick, 1874.
- SMITH, J. Lawrence. A Description of Five New Meteoric Irons, with some Theoretical Considerations based on their Physical and Chemical Characters. Vol. V., Pamphlets. Octavo series. 8vo. 33 pp. New-Haven, 1855.
- SMITHSONIAN Institution Publications:
Telegraphic Announcement of Astronomical Discoveries. *Smith. Misc. Coll.* Circular. 8vo. Washington, 1873.
- STORY Maskelyne, Nevil. Catalogue of the Collection of Meteorites exhibited in the Mineral Department of the British Museum. Vol. X., Pamphlets. Octavo series. 8vo. 8 pp. London, 1872.
- SVANBERG, Jons. Exposition des operations faites en Lapponie pour la Determination d'un Arc du Meridien, en 1801, 1802 et 1803, par Messieurs Öfverbom, Svanberg, Holmquist et Palander. Redigée par Jons Svanberg. 8vo. 198 pp. Stockholm, 1805.
- UNITED STATES Coast Survey. A. D. Bache, LL. D., Superintendent. Annual Report of the Superintendent of the Coast Survey, showing the Progress of the Survey during the years 1852, 1853, 1854, 1856 to 1863 and 1865. 4to. Washington, 1853-1867.
- Appendices to above. Appendix IX. Schott, C. A. Determination of Time, by means of the Transit Instrument. *U. S. Coast Survey Manual.* 4to. 17 pp., I. plate. Washington.

- UNITED STATES Coast Survey. A. D. Bache, LL. D., Superintendent.
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 4to. 14 pp., I. plate. Washington.
- Appendix XI. Schott, C. A. Determination of the Astronomical Azimuth of a Direction. *U. S. Coast Survey Manual*.
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- Naval Observatory. A Set of the Blanks used for Recording and Reducing Observations in the U. S. Naval Observatory. See, also, under Washington Meteorological and Astronomical Observations.
- WHEELER, George M., assisted by Dr. F. Kampf and J. H. Clark. Report upon the Determination of the Astronomical Co-ordinates of the Primary Stations at Cheyenne, Wyoming Territory, and Colorado Springs, Colorado Territory, made during the years 1872, and 1873. 4to. 82 pp. Washington, 1874.
- WILCOCKS, A. Thoughts on the Influence of Ether in the Solar Spectrum. 4to. 104 pp. 1860.

PERIODICAL PUBLICATIONS.

- ANNALS of the Dudley Observatory. Vol. I., 1866.
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OBSERVATIONS FOR 1869.

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OBSERVATIONS FOR 1870.

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PHYSICS.

- BACHE, A. D. Experiments Relating to the Alleged Influence of Color on the Radiation of Non-Luminous Heat. Vol. V., Pamphlets. Octavo series. 8vo. 13 pp.
- BARKER, George F. The Forces of Nature. An Address delivered before the Chemical Society of Union College, July 22, 1863. Vol. V., Pamphlets. Octavo series. 8vo. 45 pp. Albany, 1863.
- BARY, E. Nouveaux Problèmes de Physique. 8vo. 368 pp. Paris, 1838.
- BECQUEREL, A. C. and E. Traité d'Électricité et de Magnétisme. 3 vols. 8vo. Paris, 1856.
- BEER, A. H. Einleitung in die Höhre Optik. 8vo. 480 pp. Brunswick, 1853.
- BELVILLE, J. H. Manual of the Mercurial and Aneroid Barometers. Vol. X., Pamphlets. Duodecimo series. 12mo. 53 pp. London, 1849.
- BENET, S. V. Electro-Ballistic Machines, and the Schultz Chronoscope. 4to. 47 pp. New-York, 1866.
- BERGMAN, Torbern. Opusculs Chymiques et Physiques. 2 vols. 8vo. Dijon, 1780, 1785.
- BIOT, J. B. Précis Élémentaire de Physique Expérimentale. 2 vols. 8vo. Paris, 1817.
- BLAKE, Eli W., Jr. On a Method of Producing, by the Electric Spark, Figures Similar to those of Lichtenberg. Vol. V., Pamphlets. Octavo series. 8vo. 1870.
- BORCHERS, E. Anwendung eines Kraftigen Magnets zur Ermittlung der Durchslagrichtung zweier Gegenörter. Pamphlet. 8vo. Clausthal, 1846.
- BREWSTER, David. A Treatise on Optics, with an Appendix by A. D. Bache. 8vo. 417 pp. Philadelphia, 1847.
- and Gladstone. On the Lines of the Solar Spectrum. 4to. London, 1860.
- CLARK, Latimer. A Elementary Treatise on Electrical Measurement. 12mo. 175 pp. London, 1868.
- DAGUIN, P. A. Traité Élémentaire de Physique. 4 vols. 8vo. Toulouse, 1867, 1868.
- DESCHANÉL, A. Privat. Elementary Treatise on Natural Philosophy. Translated and Edited, with extensive additions, by J. D. Everett. Part II., Heat. Part III., Electricity and Magnetism. Part IV., Sound and Light. 3 vols. 8vo. London and New-York, 1871-1874.
- EISENLOHR, W. Lehrbuch der Physik. 8vo. 808 pp. Stuttgart, 1870.
- ELECTRO-MAGNETIC Telegraph.—Proceedings of the Regents of the Smithsonian Institution in relation to the. 8vo. 70 pp. Washington, 1859.

- EXTRACTS from the Proceedings of the Board of Regents of the Smithsonian Institution in relation to the Electro-Magnetic Telegraph. 8vo. 39 pp. Washington, 1857.
- FARADAY, Michael. Experimental Researches in Electricity. (Third series.) Vol. I., Pamphlets. Quarto series. 4to. 32 pp., I. diagram. London, 1833.
- On a Peculiar Class of Acoustical Figures; and on the Forms of Fluids Vibrating on Elastic Surfaces. Vol. I., Pamphlets. Quarto series. 4to. 42 pp. London, 1831.
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- FRANKLIN, Benjamin. Essays and Letters on Philosophical Subjects. 8vo. 477 pp. Philadelphia, 1808.
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- An Elementary Treatise on Physics. Translated by E. Atkinson. 8vo. 780 pp. London, 1863.
- The same as above. 8vo. 859 pp. New-York, 1873.
- GASSE, L. Katechismus der Electrischen Telegraphie. 12mo. 372 pp. Leipsig, 1870.
- GRETSCHEL, Heinrich. Katechismus der Physik. 24mo. 244 pp. Leipsig, 1865.
- GRIGLIETTA, C. Electro-Magnetism. A Brief Essay or Informal Lecture on Electro-Magnetism, with a Full Description of Models of Davenport's Machines, &c. 8vo. 12 pp. Philadelphia, 1838.
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- The same as above. Vol. I., Pamphlets. Quarto series. 4to. 35 pp. Philadelphia, 1841.
- JANIN, Jules Célestin. Cours de Physique de L'Ecole Polytechnique. 2 vols. 8vo. Paris, 1863.
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- KIRCHOFF, G. Untersuchungen über das Sonnenspectrum und die Spectren der Chemischen Elemente. Parts first and second. 43, 16 pp. Berlin, 1863, 1866.
- LAMÉ, G. Lehrbuch der Physik für höhere polytechnische Lehranstalten. 3 vols. 8vo. Darmstadt, 1838-1841.
- LARDNER, D. Handbook of Natural Philosophy and Astronomy. 12mo. 451 pp. Philadelphia, 1857.
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- MÜLLER, Johann. Physics and Meteorology.
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- The Principles of Physics and Meteorology.
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- PARMELLE, Abbé. Quellenkunde. 16mo. 341 pp. Leipsig, 1856.
- PÉCLET, E. Traité de la Chaleur, Considérée dans ses Applications. Third edition. 3 vols. 8vo. Paris, 1860, 1861.
- POUILLET, Claude S. M. See Addenda, p. 218.
- RAMMELSBERG, Karl Friederich. Ueber der Mittel; Lichte und Wärme. *Sammlung gemeinschaftlicher Wissenschaftlicher Vorträge*. Vol. I., Pamphlets. Duodecimo series. 12mo.
- RENWICK, James. Outlines of Natural Philosophy; being the Heads of a Course of Lectures delivered in Columbia College, New-York. 2 vols. in 1. 8vo. New-York, 1822.
- ROOD, Ogden N. An Abstract of Prof. Kobell's Stauroscopic Observations. Vol. V., Pamphlets. Octavo series. 8vo. 8 pp. 1859.
- See Addenda, p. 218.
- ROSCOE, Henry E. Spectrum Analysis. Six Lectures delivered in 1868, before the Society of Apothecaries of London.
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- SCELLEN, H. Die Spectralanalyse in ihrer Anwendung auf die Stoffe der Erde und die Natur der Himmelskörper.
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- Spectrum Analysis in its Applications to Terrestrial Substances, and the Physical Constitution of the Heavenly Bodies. Translated by Jane and Caroline Lassell.
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- SCHINZ, C. Die Wärme Messkunst.
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- SCHOEDLER, Friederich. Das Buch der Natur, die Lehren der Physik, Astronomie, Chemie, Mineralogie, Geologie, Botanik, Zoologie und Physiologie. 8vo. 614 pp. Brunswick, 1874.
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PERIODICAL PUBLICATIONS.

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First Meeting held at	Cambridge	in 1831.	} Second edition. <i>London</i> , 1835.
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40 vols. 8vo. London, 1832 to 1872.

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REVUE des Cours Scientifiques de la France et de l'Étranger.
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Vol. 2, for the year 1862. The International Exhibition, London, 1862.

ADDENDA TO PHYSICS.

POUILLET, Claude S. M. Éléments de Physique Experimentale et de Meteorologie. Second edition. 4 vols. 8vo. Paris, 1832.

—— Same as above. Seventh edition.

2 vols. 8vo. text ; 8vo. LXIX. plates. Paris, 1856.

—— Lehrbuch der Physik und Meteorologie. Fourth edition, edited by Dr. J. Muller. 2 vols. 8vo. Brunswick, 1852.

—— Same as above. Fifth edition.

2 vols. 8vo. Brunswick, 1858.

—— Same as above. Seventh edition, edited by Dr. J. Muller.

Vol. I. 8vo. 961 pp. Brunswick, 1868.

POWELL, B. A Treatise on Optics. 8vo. 183 pp. Oxford, 1833.

ROOD, Ogden N. On the Action of Very Weak Electric Light on the Iodized plate. Vol. V., Pamphlets. Octavo series.

8vo. 3 pp. 1864.

—— On the Green Tint from mixing Blue and Yellow Powders.

Vol. V., Pamphlets. Octavo series.

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8vo. 8 pp. 1862.

- ROOD, Ogden N. Photometric Experiments. *Part Second*. On the amount of Light transmitted by Plates of Polished Crown Glass at a Perpendicular Incidence. Vol. V., Pamphlets. Octavo series. 8vo. 10 pp. 1870.
- Upon Some Experiments connected with Dove's Theory of Lustre. Vol. V., Pamphlets. Octavo series. 8vo. 7 pp. 1861.

MICROSCOPY.

- BEALE, Lionel S. How to Work with the Microscope. Third edition. 12mo. 272 pp. Philadelphia, 1865.
- CARPENTER, William B. The Microscope and its Revelations. 12mo. 778 pp. London, 1856.
- The Microscope and its Revelations. 12mo. 796 pp. London, 1868.
- DESCLOISEAUX, A. Memoire sur l'Emploi du Microscope Polarisant. 8vo. 40 pp.
- JAMES, Clark H. Spongiæ Ciliatæ, as Infusoria Flagellata. Vol. X., Pamphlets. Quarto series. 4to. 38 pp. Cambridge, 1867.
- JENZSCH, Gustav. Ueber eine Mikroskopische Flora und Fauna. Krystallinischer Massengesteine. 8vo. 29 pp. Leipsig, 1868.
- ROBIN, Ch. Traité du Microscope. 8vo. 1028 pp. Paris, 1871.
- ROOD, Ogden N. On Certain Adaptations of the Compound Microscope. Vol. V., Pamphlets. Octavo series. 8vo. 3 pp. 1856.
- ROSS, Andrew. The Article "Microscope." (*From the Penny Cyclopaedia*.) Vol. X., Pamphlets. Quarto series. 4to. 12 pp.
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PERIODICAL PUBLICATIONS.

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Vols. I. to X., 1865 to 1874. Vol. XI., 1875, hefts 1 and 2, and Supplemental heft. General Index to Vols. I. to VIII.

THE MONTHLY Microscopical Journal. Transactions of the Royal Microscopical Society, and Record of Histological Research at Home and Abroad.

Edited by HENRY LAWTON. 8vo. Monthly. Two vols. a year. London, 1869 to date.

Vols. I. to XII., 1869 to 1874. Vol. XIII., 1875, January to June.

GENERAL AND INORGANIC CHEMISTRY.

- ABEL, F. A., and Bloxam. Handbook of Chemistry. Second edition. 8vo. 785 pp. London, 1858.
- ACCUM, Frederick. A System of Theoretical and Practical Chemistry. 2 vols. 8vo. London, 1807.
- ATOMGEWICHTS Tabellen. Besonderer Abdruck aus Berzelius-Lehrbuch der Chemie. Vol. XXVII., Pamphlets. Octavo series. 8vo. 31 pp. 1845.
- ATTFIELD, J. Chemistry. General, Medical, and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia. From the English edition. 12mo. 552 pp. Philadelphia, 1871.
- BARKER, George F. A Text Book of Elementary Chemistry, Theoretical and Inorganic. 12mo. 342 pp. New-Haven, 1870.
- BERGMAN, Torbern. Opuscules Chymiques et Physiques. 2 vols. 8vo. Dijon, 1780, 1785.
- BERTHOLLET, C. L. Researches into the Laws of Chemical Affinity. Translated from the French by M. Farrell. 12mo. 212 pp. Baltimore, 1809.
- BERZELIUS, J. J. Lehrbuch der Chemie. 5 vols. 8vo. Leipsig, 1843, 1848.
- Traité de Chimie. Traduit par A. J. L. Jourdan. 8 vols. 8vo. Paris, 1829–1833.
- BLACK, Joseph. Lectures on the Elements of Chemistry, delivered in the University of Edinburgh. 3 vols. 8vo. Philadelphia, 1806–1807.
- BLOMSTRAND, C. W. Den nyare Atomtheorien fran electro kemisk Standpunkt. Vol. V., Pamphlets. Quarto series. 4to.
- Die Chemie der Jetztzeit. 4to. 417 pp. Heidelberg, 1869.
- BOLTON, H. C. Index to the Literature of Uranium. Vol. XXIX., Pamphlets. Octavo series. 8vo. New-York, 1870.
- On the Fluorine Compounds of Uranium. *Inaugural Dissertation.* Vol. XXVII., Pamphlets. Octavo series. 8vo. Berlin, 1866.
- Outlines of a Bibliography of the History of Chemistry. Vol. XXXI., Pamphlets. Octavo series. 8vo. 1874.
- BRANDE, W. T., and A. S. Taylor. Chemistry. 8vo. 696 pp. Philadelphia, 1863.
- BRISSON, J. The Physical Principles of Chemistry. Translated from the French. 8vo. 424 pp. London, 1801.
- BUFF, H., Kopp, H., and Zamminer, F. Lehrbuch der Physikalischen und Theoretischen Chemie. 8vo. 860 pp. Brunswick, 1857.

- BUNSEN and Roscoe. Photo-Chemical Researches. 4to. London, 1857.
- CAHOURS, Auguste. Leçons de Chimie Élémentaire. 2 vols. 12mo. Paris, 1855, 1856.
- CENTENNIAL of Chemistry, held August 1, 1874, at Northumberland, Pa. Proceedings of the. *Reprinted from the August—September and December numbers of the American Chemist.* 4to. 209 pp. Philadelphia, 1875.
- CHANDLER, Charles F. Lecture on Water, delivered before the American Institute of the City of New-York, in the Academy of Music, January 20, 1871. Pamphlet. 8vo. Albany, 1871.
- Miscellaneous Chemical Researches. An *Inaugural Dissertation* to the Philosophical Faculty of the University of Göttingen. Vol. XXVII., Pamphlets. Octavo series. 8vo. 52 pp. Albany, 1857.
- CHAPTAL, I. A. Elements of Chemistry. 3 vols. 8vo. London, 1791.
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- Crystalline Form Not Necessarily an Indication of Definite Chemical Composition. Vol. II., Pamphlets. Octavo series. 8vo. 12 pp. 1860.
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- FEHLING, Hermann v. Neues Handwörterbuch der Chemie. Auf Grundlage des von Liebig, Poggendorff und Wöhler, Kolbe und Fehling herausgegebenen Handwörterbuchs der reinen und angewandten Chemie. Vol. I., 1247 pp. Vol. II., parts 1, 2, 3. Brunswick, 1871-1874.
- FOURCROY, A. F. Éléments d'Histoire Naturelle et de Chimie. 5 vols. 12mo. Paris, 1793.
- FOWNES, George. A Manual of Elementary Chemistry. Seventh edition. 16mo. 726 pp. London, 1858.
- A Manual of Elementary Chemistry. Eleventh edition. Revised by Henry Watts. 12mo. 1026 pp. London, 1873.
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- FRANCIS, G. W. Chemical Experiments. 8vo. 250 pp. London, 1858.
- FRANKLAND, E. Lecture Notes for Chemical Students. Vol. I. 12mo. 220 pp. London, 1870.
- GIBBS, Wolcott. On the Rational Constitution of Certain Organic Compounds. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 20 pp. 1858.
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- Researches on the Platinum Metals. Vol. XXXI., Pamphlets. Octavo series. 3 Pamphlets. 3, 8, 20 pp. 1860, 1861, 1862.
- and Genth, F. A. Researches on the Ammonia Cobalt Bases. 4to. 67 pp. Washington, 1856.
- GMELIN, Leopold. Hand Book of Chemistry. Translated by Henry Watts. 17 vols. 8vo. London, 1848 to 1866.
- Handbuch der Anorganischen Chemie. Fifth edition. 5 vols. 8vo. Heidelberg, 1852, 1853.
- The same as above. Sechste umgearbeitete Auflage. Erste Band-Erste Abtheilung. Allgemeine Theil. Edited by Dr. Alexander Naumann. Lieferungs, 1 to 5. Zweite Abtheilung. Die Metalloide. Edited by Prof. H. Ritter. Lieferungs, 1 to 8. Zweite Band. Metalle. Edited by Karl Kraut. Lieferungs, 1 to 4. Dritte Band. Die Metalle. Edited by Dr. S. M. Jörgensen. Lieferungs, 1 to 17. 8vo. Leipzig, 1874.
- GREEN, Jacob. Chemical Diagrams; or, Concise Views of many Interesting Changes produced by Chemical Affinity. 16mo. 90 pp. Philadelphia, 1837.

- GRIFFIN, J. J.* The Radical Theory in Chemistry.
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sous l'action combinée du Fer Metallique et des Oxydes de
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- HENRY, William. The Elements of Experimental Chemistry.
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- HEPPE, Gustav. Die Chemische Reactionen der wichtigsten anor-
ganischen und organischen Stoffe. Tabellen alphabetischer
Anordnung. 8vo. 392 pp. Leipsig, 1815.
- HOEFER, Ferdinand. Histoire de la Chimie.
8vo. 2 vols. Paris, 1842, 1843.
- HOFFMAN, A. W. Lectures on Chemistry.
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- HOLLMAN, P. J. Mémoire sur L'Équivalent Calorifique de L'Ozone.
Vol. I., Pamphlets. Quarto series. 4to. 78 pp. Utrecht, 1868.
- HUNT, T. Sterry. Sur les Volumes Atomiques. Vol. III., Pamphlets.
Quarto series. 4to. 5 pp. 1855.
- JOHNSON, James F. W. Chemical Tables, exhibiting the Present
State of Our Knowledge in regard to the Chemical and
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- JOY, Charles A. Chemistry. *An Inaugural Address.* Vol. XVII.,
Pamphlets. Octavo series. 8vo. 25 pp. New-York, 1858.
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Octavo series. 8vo. 11 pp. 1863.
- LAGRANGE, E. J. Manuel d'un Cours de Chimie.
3 vols. 12mo. Paris, 1812.
- J. B. B. A Manual of a Course of Chemistry.
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- LANG, Viktor von. Versuch einer Monographie des Bleivitriols.
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8vo. 54 pp., XXVIII. plates. Vienna, 1859.
- LAVOISIER, Antoine Laurent. Elements of Chemistry in a New
Systematic Order, &c. Translated from the French by
Robert Karr. 2 vols. in 1. 8vo. New-York, 1806.

- LAVOISIER, Antoine Laurent. *Traité Élémentaire de Chimie*.
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- LIEBIG, Justus von. Poggendorff, J. C., and Wöhler, J. S. L.
Handwörterbuch der Reinen und Angewandten Chemie.
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- MARVIN, D., Jr. Lavoisier. *An Essay read before the Chemical
Society of Columbia College, April 8, 1863*. Vol. XXVII., Pam-
phlets. Octavo series. 8vo. 16 pp. Brooklyn, 1863.
- MILLER, William Allen. *Elements of Chemistry. Theoretical and
Practical*.
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lytical, as applied to the Arts and Manufactures*.
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- *Encyklopädisches Handbuch der Technischen Chemie*.
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- *Theoretische, practische und analytische Chemie in Anwend-
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Vol. II. *Cadmium to Firnis*.
Vol. I. *Lieferungs, 1, 2, 3*.
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- NAQUET, A. Principles of Chemistry. Translated from the Second edition by W. Cortis. Revised by Thomas Stevenson.
8vo. 848 pp. London, 1868.
- NEUMAN, Casper. The Chemical Works of, with large additions, containing the later Discoveries and Improvements in Chemistry and the Arts depending thereon, by William Lewis.
2 vols. 8vo. London, 1773.
- ORTO, Friederich Julius. Ausführliches Lehrbuch der Chemie. Mit Benutzung des Allgemeinen Theiles von Dr. Thomas Graham's Elements of Chemistry. Dritte Auflage. Anorganischen Chemie. Vol. II. Parts 1, 2, 3.
3 vols. 8vo. Brunswick, 1852, 1853, 1854.
- PARKES, Samuel. The Chemical Catechism.
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8vo. 10 pp. 1862.
- PORTER, J. A. Principles of Chemistry.
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- PROCEEDINGS at the Centennial of Chemistry, held August 1, 1874, at Northumberland, Pa. *Rep. from Am. Chemist.*
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- REGNAULT, Henri Victor. Cours Élémentaire de Chimie. Third edition.
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- and Strecker, Adolph. Lehrbuch der Chemie.
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- The same as above. New American edition.
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- SCHEELE, C. W. Chemical Essays. 8vo. 406 pp. London, 1786.
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- Elements of Chemistry.
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- SONDHAUS, C. F. J. De Vi Quam Color Habet in Fluidorum Capillaritatem.
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- STAMMER, Karl. Chemisches Laboratorium. Anleitung zum Selbstunterricht in der Chemie. 8vo. 609 pp. Giessen, 1856.
- STEELE, J. D. A Fourteen Weeks' Course in Chemistry. 8vo. 266 pp. New-York, 1869.
- ST. JOHN, James. A Method of Chemical Nomenclature. 8vo. London, 1788.
- STORER, F. H. First Outlines of a Dictionary of Solubilities of Chemical Substances. 8vo. 713 pp. Cambridge, 1864.
- and Eliot, C. W. On the Chromate of Chromium, and Analogous Chromates. Vol. XXI., Pamphlets. Octavo series. 8vo. 35 pp. 1861.
- STRECKER, Adolph. Kurzes Lehrbuch der Anorganischen Chemie theilweise nach Victor Regnault. Seventh edition. 16mo. 432 pp. Brunswick, 1869.
- The same as above. Eighth edition. 12mo. 770 pp. Brunswick, 1869.
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- SVENSSON, N. Svalfölsyrliga salter med Kopparoxidul och silveroxid. Vol. III., Pamphlets. Quarto series. 4to. 24 pp. 1870.
- THENARD, L. J. Traité de Chimie, Theoretique et Pratique. 2 vols. 8vo. Paris, 1829.
- THOMPSON, Thomas. An Attempt to Establish the First Principles of Chemistry by Experiments. 2 vols. 8vo. London, 1825.
- A System of Chemistry, from the Fifth London edition, with notes by Thomas Cooper. 4 vols. 8vo. Philadelphia, 1818.
- A System of Chemistry of Inorganic Bodies. 2 vols. 8vo. London, 1831.
- On Some of the Compounds of Chromium. 4to. 73 pp. London, 1827.
- Some Experiments on Gold. Vol. III., Pamphlets. Quarto series. 4to. 11 pp. Edinburgh, 1827.
- VANUXEN, Lardner. An Essay on the Ultimate Principles of Chemistry, Natural Philosophy and Physiology. Part I. 8vo. 91 pp. Philadelphia, 1827.
- VERGNAUD, A. D. Chimie Amusante. 24mo. 383 pp. Paris, 1854.
- WATSON, R. Chemical Essays. Seventh edition. 5 vols. 16mo. London, 1800.
- WATTS, Henry. A Dictionary of Chemistry and the allied branches of other Sciences. 5 vols. and two Supplements. 8vo. London.
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- WEBER, R. Atomgewichts-Tabellen. 8vo. 125 pp. Brunswick, 1852.
- WELLS. Principles and Applications of Chemistry. Sixth edition. 8vo. 515 pp. New-York, 1863.
- WETHERELL, C. M. On the Crystallization of Sulphur, and upon the Reaction between Sulphide of Hydrogen, Ammonia and Alcohol. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 8 pp. 1865.
- WEST, Gratien. Statistique des Volumes des Equivalents Chimiques et d'autres donnés relatives à leurs propriétés physiques suivie d'un Memoire sur quelques questions moléculaires. 4to. 304 pp. Paris, 1875.
- WILLIAMSON, A. W. Chemistry for Students. 12mo. 479 pp. Oxford, 1868.
- WILSON, George. Inorganic Chemistry, Revised and Enlarged by H. G. Madan. 12mo. 528 pp. London, 1871.
- WING, C. H. On Certain Double Sulphates of the Cerium Group. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 10 pp. 1870.
- WINKLER, C. A. Untersuchungen über die Chemischen Vorgänge in der Gay-Lussacschen Condensationsapparaten der Schwefelsäurefabriken. 12mo. 36 pp. Freiberg, 1867.
- WITTSTEIN, G. C. Wiederlegung der Chemischen Typenlehre. 8vo. 96 pp. Munich, 1862.
- WÖHLER. Grundriss der Chemie (Anorganischen und Organischen.) 2 vols. 12mo. Berlin, 1848-1851.
- WURTZ, Henry. On the Preparation of Some Pure Sulphates, and Particularly of Sulphate of Copper. 8vo. 3 pp. 1858.
- Karl Adolph. Dictionnaire de Chimie, Pure et Appliquée. Vol. I. Part 1. A.-B. 8vo. 686 pp. 1869.
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- Vol. II. Part 1. H.-Phe. 8vo. 920 pp. 1873.
Part 2. Phe.-Rue. 1874. 4 vols. 8vo. Paris.
- ZUCHOLD, E. A. Bibliotheca Chemica, 1840-1858. 8vo. 342 pp. Gottingen, 1859.

PERIODICAL PUBLICATIONS.

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- KOLBE, Hermann. Ausführliches Lehrbuch der Organischen Chemie. 2 vols. 3vo. Brunswick, 1854, 1860.
- The same as above. Vol. III., part II. Edited by H. von Fehling. 8vo. 160 pp. Brunswick, 1868.
- Ueber die Chemische Constitution der Organischen Kohlenwasserstoffe. Vol. XXI., Pamphlets. Octavo series. 8vo. 40 pp. Brunswick, 1869.
- KROMAYER, Augusta. Die Bitterstoffe und Krazenschmeckenden Substanzen des Pflanzenreichs. 8vo. 146 pp. Erlangen, 1861.
- LAURENT, Auguste. Methode de Chimie. 8vo. 464 pp. Paris, 1854.
- LIEBIG, Justus von. Anleitung zur Analyse Organischen Körper. 8vo. 130 pp. Brunswick, 1853.
- Chemische Briefe. Dritte Auflage. 8vo. 668 pp. Heidelberg, 1851.
- Chimie Organique appliquée à la Physiologie Végétale et à L'Agriculture, suivie d'un Essai de Toxicologie par C. Gerhardt. 8vo. 392 pp. Paris, 1841.
- Traité de Chimie Organique. Publiée par C. Gerhardt. 3 vols. 8vo. Paris, 1841-1844.
- MILLER, William Allen. Elements of Chemistry. Theoretical and Practical. Part III. Organic Chemistry. 854 pp. 1857. 8vo. London.
- RAMMELSBERG, Karl Friederich. Vergleichende Bemerkungen über die Krystallform organischer Verbindungen vom Typus des Ammoniaks. Vol. IX., Pamphlets. Octavo series. 8vo. 11 pp.

- RASPAIL, F. V. *Nouveau Système de Chimie Organique.* 8vo. 576 pp. Paris, 1833.
- SILLIMAN, Benjamin. *American Contributions to Chemistry. An Address delivered on the occasion of the Celebration of the Centennial of Chemistry, at Northumberland, Pa., August 1, 1874.* 8vo. 173 pp. Philadelphia, 1874.
- SYNOPSIS of Organic Chemistry. Printed for the Junior Classes of Union College. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 12 pp. Troy, 1864.
- THOMSON, Thomas. *On a New Combustible Gas.* Vol. V., Pamphlets. Quarto series. 4to. 8 pp. Edinburgh, 1827.
- WARREN, C. M. *On a Process of Fractional Condensation.* 4to. 13 pp.
- *Researches on the Volatile Hydrocarbons. Two Memoirs.*
- I. *On the Volatile Hydrocarbons from Coal Tar, Naphtha, Oil of Cumin and Cuminc Acid.*
- II. *On the Influence of C. H. upon the Boiling Points in Homologous Series of Hydrocarbons and in some series of their Derivatives; with Critical Observations on Methods of Taking Boiling Points.* 8vo. 42 pp. Cambridge, 1865.
- and Storer, F. H. *Researches on the Volatile Hydrocarbons. Two Memoirs.*
- I. *Naphtha from Lime Soap.* II. *Naphtha from Rangoon Petroleum.* Vol. V., Pamphlets. Quarto series. 4to. 41 pp. Cambridge, 1866.
- WETHERILL, C. M. *On Apidocere and its Formation.* Vol. III., Pamphlets. Quarto series. 4to. 25 pp. Philadelphia, 1855.
- *On a New Variety of Asphalt, (Melan-Asphalt.* Vol. III., Pamphlets. Quarto series. 4to. 6 pp. Philadelphia, 1852.
- *On the Crystallization of Sulphur, and upon the Reaction between Sulphur of Hydrogen, Ammonia and Alcohol.* Vol. XXVIII., Pamphlets. Octavo series. 8vo. 8 pp. 1865.
- *On the Neutral Sulphate of the Oxide of Ethyle, and the Results of its Decomposition by Water.* Vol. III., Pamphlets. Quarto series. 4to. 5 pp. Philadelphia, 1848.

PERIODICAL PUBLICATIONS.

See Periodical Publications, under General and Inorganic Chemistry, p. 227.

ANALYTICAL CHEMISTRY.

- BERTHIER, P. Handbuch der metallurgisch Analytische Chemie.
 2 vols. 8vo. Leipsig, 1835, 1836.
- BERZELIUS, J. J. The Use of the Blowpipe in Chemical Analysis.
 8vo. 343 pp. London, 1822.
- Traité de Chimie Minérale, Végétale et Animale. Seconde
 édition. Traduit par MM. Esslinger et Hoefer.
 6 vols. 8vo. Paris, 1845–1850.
- BOLLEY, P. A., and Paul, Benjamin H. A Manual of Technical
 Analysis. 12mo. 426 pp. London, 1857.
- BOWMAN, J. E. An Introduction to Practical Chemistry, including
 Analysis. Third American edition.
 12mo. 333 pp. Philadelphia, 1864.
- BUNSEN, R. Gasometrische Methoden.
 24mo. 305 pp. Brunswick, 1857.
- Ueber Eine Volumetrische Methode von sehr Allgemeiner
 Anwendbarkeit. Vol. II., Pamphlets. Duodecimo series.
 12mo. 48 pp., I. plate. Heidelberg, 1854.
- and Roscoe. Gasometry. 8vo. 298 pp. London, 1857.
- CALDWELL, G. C. Agricultural Qualitative and Quantitative
 Chemical Analysis. 8vo. 307 pp. New-York, 1869.
- CHANDLER, Charles F. A Scheme for the Analysis of Iron Ore, for
 the Use of the Students of the School of Mines.
 ——— Lecture on Water, delivered before the American Institute
 of the City of New-York, in the Academy of Music, January
 20, 1871. Pamphlet. 8vo. Albany, 1871.
- Miscellaneous Chemical Researches. An *Inaugural Dissertation*
 to the Philosophical Faculty of the University of Göt-
 tingen. Vol. XXVII., Pamphlets. Quarto series.
 8vo. 52 pp. Albany, 1857.
- Report on the Waters of the Hudson River, together with
 an Analysis of the same, made to the Water Commissioners
 of the City of Albany. Vol. XVII., Pamphlets. Octavo series.
 8vo. 25 pp. Albany, 1872.
- CHURCH, A. R. The Laboratory Guide.
 8vo. 174 pp. London, 1870.
- CLAUS, C. Methodische Reactions—Tabellen behufs Chemischer
 Qualitativ—Analytischer Untersuchungen, zum gebrauch
 für Mediciner und Pharmaceuten. 16 pp. Dorpat, 1862.
- COLLIER, P. On the Indirect Determination of Potash and Soda.
 Vol. XVII., Pamphlets. Octavo series. 8vo. 1864.
- DAVY, Edmund. On a Simple Electro-Chemical Method of Ascertain-
 ing the Presence of Different Metals. Vol. V., Pamphlets.
 Quarto series. 4to. 17 pp. London, 1831.

- DAVY, *Sir* Humphrey. The Collected Works of, edited by his brother, John Davy. Vol. III. Researches on Nitrous Oxide, &c. 342 pp. London, 1839.
- EDWARDS, A. M. A Series of Chemical Tables. 8vo. New-York, 1870.
- ELIOT, C. W., and Storer, F. H. A Compendious Manual of Qualitative Chemical Analysis. 8vo. 191 pp. New-York, 1869.
- FRESENIUS, C. Remegius. A System of Instruction in Qualitative Chemical Analysis. Fourth edition. Edited by J. Lloyd Bullock. 8vo. 310 pp. London, 1855.
- The same. Edited by Samuel W. Johnson. 8vo. 434 pp. New-York, 1872.
- A System of Instruction in Quantitative Chemical Analysis. Edited by J. Lloyd Bullock. Second edition. 8vo. 624 pp. London, 1854.
- The same. Fifth English, from the Fifth German edition. Translated by A. Vacher. 8vo. 377 pp. London, 1870.
- The same. Translated from the Fifth German edition, by A. Vacher. 8vo. 791 pp. London, 1873.
- The same. Edited by Samuel W. Johnson. 8vo. 631 pp. New-York, 1871.
- Elementary Instruction in Chemical Analysis. Edited by J. Lloyd Bullock. 8vo. 284 pp. New-York, 1844.
- Geschichte des Chemischen Laboratoriums zu Wiesbaden, Zur Feier des 25 Jährigen Bestehens der Anstalt. 8vo. 32 pp. Wiesbaden, 1873.
- GALLOWAY, R. A Manual of Qualitative Analysis. 12mo. 443 pp. London, 1870.
- GERHARDT, C. K. F. Précis d'Analyse Chimique Qualitative. Second edition. 8vo. 699 pp. Paris, 1867.
- and Chancel, G. Précis d'Analyse Chimique Quantitative. Second edition. 8vo. 692 pp. Paris, 1864.
- GIBBS, Wolcott. Contributions to Analytical Chemistry. No. 1. 6 pp. 1852. Vol. XVII., Pamphlets. Octavo series.
- The same as above. No. 2. 9 pp. 1865.
- Contributions to Chemistry from the Laboratory of the Lawrence Scientific School. Vol. XXXI., Pamphlets. Octavo series. 3 Pamphlets. 8vo. 14, 11, 19 pp. 1864, 1865, 1867.
- GRONER, L. Mémoire sur le Dedoublement de L'Oxide de Carbone sous l'action combinée du Fer Metallique et des Oxydes de ce Métal. Vol. II., Pamphlets. Quarto series. 4to. 66 pp. Paris, 1872.
- HAMPE, W. Tafeln zur qualitativen chemischen Analyse. 8vo. XI. tables. Clausthal, 1868.
- HINRICHS, Gustavus. The Method of Quantitative Induction in Physical Sciences. A Guide for Students in the Laboratory and Lecture Room. Vol. XXVII., Pamphlets. Octavo series. 8vo. 45 pp. Davenport, Iowa, 1860.
- HUNT, T. Sterry. Contributions to the Chemistry of Natural Waters. Vol. XVII., Pamphlets. Octavo series. 8vo. 54 pp. Montreal, 1865.

- HUNT, T. Sterry. Contributions to the History of Lime and Magnesia Salts. 8vo. 19 pp. 1866.
- Joy, Charles A. Analysis of Meteorite from Chili. Vol. XI., Pamphlets. Octavo series. 8vo. 6 pp. New-York, 1864.
- Chemistry. *An Inaugural Address*. Vol. XVII., Pamphlets. Octavo series. 8vo. 25 pp. New-York, 1858.
- Examination of a Few American Minerals. Vol. XI., Pamphlets. Octavo series. 8vo. 6 pp. New-York, 1865.
- Examination of American Blendes for Thallium and Indium. Vol. XI., Pamphlets. Octavo series. 8vo. 4 pp. 1866.
- Miscellaneous Chemical Researches. *Inaugural Dissertation*. 8vo. 49 pp. Gottingen, 1853.
- On Glucinum and Its Compounds. Vol. XXIX., Pamphlets. Octavo series. 8vo. 11 pp. 1863.
- On the Chimenti Pictures. Vol. V., Pamphlets. Octavo series. 8vo. 7 pp.
- KNOP, W. Handbuch der Chemischen Methoden. 8vo. 506 pp. Leipsig, 1859.
- KOLBE, Hermann. Das Chemische Laboratorium der Universität Leipsig und die Seit 1866 darin ausgeführten Chemischen Untersuchungen. 8vo. 667 pp. Brunswick, 1872.
- LANG, Viktor von. Versuch einer Monographie des Bleivitriols. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 54 pp., XXVIII. plates. Vienna, 1859.
- LAURENT, Auguste. Methode de Chimie. 8vo. 464 pp. Paris, 1854.
- LÜBSEN, H. B. Ausführliches Lehrbuch der Analyse. 8vo. 178 pp. Hamburg, 1853.
- MATZDORF, J. Martius. Katechismus der Galvanoplastik. 12mo. 104 pp. Leipsig, 1868.
- MOHR, Friedrich. Lehrbuch der Chemischen Analytischen Titrir Methode. 2 vols. 8vo. Brunswick, 1855, 1856.
- MUSPRATT, Sheridan. Chemistry, Theoretical, Practical and Analytical, as applied to the Arts and Manufactures. 2 vols. 4to. London, 1860.
- Encyklopädisches Handbuch der Technischen Chemie.
 Vol. I. Aether-Cyan. Edited by D. F. Stohman, 1865.
 Vol. II. Dextrin-Gummi. " " D. F. Stohman, 1866.
 Vol. III. Harze-Mangan. " " Bruno Kerl, 1868.
 Vol. IV. Natrium-Strontium. Edited by Bruno Kerl, 1869.
 Vol. V. Textilindustrie-Zirkonium. " Bruno Kerl, 1870.
 Vol. VI. Zucker-Nachträge. " Bruno Kerl, 1870.
- 6 vols. Imp. 8vo. (Illustrated.) Brunswick.
- Outlines of Qualitative Analysis. 7 tables. London, 1850.
- Theoretische, practische und analytische Chemie in Anwendung auf Kunst und Gewerbe. Dritte Auflage. Frei bearbeitet von Bruno Kerl und F. Stohman.
 Vol. I. Aether to Butter und Milch.
 Vol. II. Cadmium to Firnis.
 Vol. III. Lieferungs, 1, 2, 3.
 2 vols. 4to. (Illustrated.) Brunswick, 1874.

- NEUBAUER, C., and Vogel, J. Anleitung zur Qualitativen und Quantitativen Analyse des Harnes zum Gebrauche für Medicinen und Pharmaceuten. 8vo. 294 pp. Weisbaden, 1856.
- NORMANDY, A. A Handbook of Commercial Analysis. Second edition. 8vo. 64 pp. London, 1865.
- PETERSEN, Theodor. Die Chemische Analyse.
 Vol. I. Die Qualitative Analyse. 270 pp.
 Vol. II. Die Quantitative Analyse. 270 pp.
 2 vols. in 1. 12mo. Berlin, 1863, 1864.
- PIGGOT, A. S. The Chemistry and Metallurgy of Copper. 12mo. 388 pp. Philadelphia, 1858.
- RAMMELSBERG, Karl Friederich. Leitfaden für die qualitative chemische Analyse mit besonderer rücksicht auf Heinrich Rose's ausführliches Handbuch der analytischen Chemie. Fifth edition. 12mo. 151 pp. Berlin, 1867.
- Leitfaden für die quantitative chemische Analyse. Second edition. 8vo. 322 pp. Berlin, 1863.
- REPORT of the Analysis of the Waters of Chechunk Springs, in the Town of Goshen. Vol. XXVII., Pamphlets. Octavo series. 8vo. 24 pp. Goshen, 1820.
- ROSE, Heinrich. Ausführliches Handbuch der Analytischen Chemie Qualitative und Quantitative. 4 vols. 8vo. Brunswick, 1851.
- Handbuch der Analytischen Chemie. Sixth edition. Vol. I. Qualitative Analyse. Vol. II. Quantitative Analyse. 2 vols. 8vo. Leipsig, 1867.
- Traité Complet de Chimie Analytique Qualitativ et Quantitativ. 2 vols. 8vo. Paris, 1859, 1862.
- Traité Pratique d'Analyse Chimique. Traduit de l'Allemand par A. J. L. Jourdan. 2 vols. 8vo. Paris, 1843.
- SCHWEITZER, Paul. Contributions from the Laboratory of the State University of the State of Missouri :
 A. On the True Composition of Coal, and on the Methods of Arriving at it; with Deductions and Remarks on Coal in General; illustrated on a Sample of Coal from the Lower Coal Series of Missouri. 8vo. 19 pp. Jefferson City, 1875.
- SHARPLES, S. P. Chemical Tables. 12mo. 192 pp. Cambridge, 1866.
- SILLIMAN, Benjamin. American Contributions to Chemistry. An Address delivered on the occasion of the Celebration of the Centennial of Chemistry, at Northumberland, Pa., August 1, 1874. 8vo. 173 pp. Philadelphia, 1874.
- Benjamin, Jr. Description and Analysis of Several Minerals. Vol. XII., Pamphlets. Octavo series. 8vo. 18 pp. 1849.
- SLATER, J. W. Handbook of Chemical Analysis for Practical Men. Second edition. 12mo. 384 pp. London, 1861.

- SMITH, J. Lawrence. Scientific Researches.
8vo. 401 pp. Louisville, Ky., 1873.
- SPENCER, W. H. Elements of Qualitative Chemical Analysis.
4to. 94 pp. London, 1866.
- STAHL, Leopold. Allgemeiner Gang der Qualitativen Chemischen Analyse.
12mo. 93 pp. Berlin, 1862.
- STEINBECK, Georg Victor Albert. Chemisch-Analytische Untersuchungen über die Veränderung, welche der Mansfelder Kupferstein bei seiner Röstung behufs Entsilberung durch die Ziervogelsche Extractionsmethode leidet. *An Inaugural Dissertation*.
12mo. 56 pp. Halle, 1862.
- STURM, J. K. F. Cours d'Analyse de L'Ecole Polytechnique.
2 vols. in one. 8vo. 206 pp. Paris, 1852.
- SUTTON, Francis. A Systematic Handbook of Volumetric Analysis.
8vo. 377 pp. London, 1871.
- THOMPSON, Thomas. Outlines of Mineralogy, Geology and Mineral Analysis. Seventh edition. 2 vols. 8vo. London, 1836.
- TURNER, Edward. Chemical Examination of the Oxydes of Manganese. Vol. X., Pamphlets. Quarto series.
4to. 32 pp. Edinburgh, 1828.
- WANKLYN, Chapman. Water Analysis. A Practical Treatise on the Examination of Potable Water.
16mo. 103 pp. London, 1868.
- WATTS, Henry. A Dictionary of Chemistry and the allied branches of other Sciences. 5 vols. and two Supplements.
8vo. London.
Vol. I. Abichite—Conglomerate. 1137 pp. 1863.
Vol. II. Conhydrine—Gytge. 985 pp. 1864.
Vol. III. Hæmaphein—Mysorin. 1096 pp. 1865.
Vol. IV. Nacrite—Pyruvic Acid. 1115 pp. 1866.
Vol. V. Quadrantoxide—Zymurgy. 1188 pp. 1868.
First Supplement. Acetic Acid—Sulphur. 1194 pp. 1872.
Second Supplement. 1215 pp. 1875.
- WICKE, Wilh. Anleitung zur Chemischen Analyse.
8vo. 467 pp. Brunswick, 1857.
- WILL, Heinrich. Anleitung zur Chemischen Analyse zur gebrauch im Chemischen Laboratorium zu Giessen.
12mo. 314 pp. Leipsig, 1857.
- Tafeln zur Qualitativen Chemischen Analyse. Fourth edition.
12mo. 22 pp. Leipsig, 1857.
- WILLIAMS, C. G. A. Handbook of Chemical Manipulations.
12mo. 580 pp. London, 1857.
- WÖHLER, F. Practische Übungen in der Chemischen Analyse.
12mo. 218 pp. Gottingen, 1853.
- Grundriss der Chemie (Anorganischen und Organischen).
2 vols. 12mo. Berlin, 1848–1851.
- WURTZ, Henry. Contributions to Analytical Chemistry. 3 Pamphlets. 38, 14, 9 pp. 1858. Vol. XVII., Pamphlets. Octavo series.

WURTZ, Henry, and Leeds, Albert R. Reports to the Board of Public Works of Jersey City on Analyses of the Water of the Passaic River. 8vo. Jersey City, 1873.

——— Karl Adolph. Dictionnaire de Chimie, Pure et Appliquée.

Vol. I. Part 1. A.-B. 8vo. 686 pp. 1869.

Part 2. C.-G. 8vo. 973 pp. 1873.

Vol. II. Part 1. H.-Phe. 8vo. 920 pp. 1873.

Part 2. Phe.-Rue. 1874. 4 vols. 8vo. Paris.

See, also, Assaying; and Determinative Mineralogy and Blow Pipe Analysis.

PERIODICAL PUBLICATIONS.

See under General and Inorganic Chemistry, page 220.

AGRICULTURAL CHEMISTRY.

- ANDERSON, T. Elements of Agricultural Chemistry.
8vo. 299 pp. Edinburgh, 1860.
- BRITISH Patent Office. Abridgments of Specifications of Patents
relating to Manure. 12mo. 55 pp. London, 1857.
- CALDWELL, G. C. Agricultural Qualitative and Quantitative
Chemical Analysis. 8vo. 307 pp. New-York, 1869.
- CHAPTAL, I. A. Chemistry Applied to Agriculture. Translated
from the Second French edition. 12mo. 365 pp. Boston, 1836.
- DAVY, *Sir* Humphrey. Elements of Agricultural Chemistry, with
a Treatise on Soils and Manures. 8vo. 396 pp. Philadelphia, 1821.
- On the Safety Lamp. 8vo. 148 pp. London, 1818.
- The Collected Works of. Edited by his brother, John
Davy. 8 vols. 8vo. London, 1839.
- Vols. VII., VIII. Elements of Agricultural Chemistry and
other lectures. 391, 365 pp.
- FLAGG, Melzer. Remarks on the Culture of the Grape, and the
Manufacture of Wine in the Western States, comprised in a
report made by direction of the Cincinnati Horticultural
Society. 8vo. 32 pp. Cincinnati, 1846.
- HAMM, Wilhelm. Katechismus der Ackerbau-Chemie der Boden-
kunde und Düngerlehre. 24mo. 116 pp. Leipsig, 1871.
- HEDGES, Isaac A. Sorgo, or the Northern Sugar Plant, with an
introduction by William Clough. 12mo. 204 pp. Cincinnati, 1863.
- JOHNSON, James F. W. Elements of Agricultural Chemistry and
Geology. Seventh edition. 12mo. 410 pp. Edinburgh, 1856.
- Instructions for the Analysis of Soils, Limestones and
Manures. Third edition. 12mo. 101 pp. Cleveland, 1856.
- Lectures on the Applications of Chemistry and Geology to
Agriculture. Fifth edition, with Appendix. 8vo. 708 pp. New-York, 1849.
- The Chemistry of Common Life. 2 vols. 12mo. New-York, 1855.
- S. W. How Crops Feed. 12mo. 375 pp. New-York, 1870.
- How Crops Grow. 12mo. 394 pp. New-York, 1868.
- Report on Commercial Fertilizers. Vol. XVI., Pamphlets. Octavo
series. 8vo. 19 pp. 1870.
- Report on Peat, Muck and Commercial Manures. 12mo. 174 pp. Hartford, 1858.
- LIEBIG, Justus von. Chimie Organique appliquée à la Physiologie
Végétale et à L'Agriculture, suivie d'un Essai sur Toxicologie par C. Gerhardt. 8vo. 392 pp. Paris, 1841.

- LIEBIG, Justus von. Die Chemie in ihren anwendung auf Agricultur und Physiologie. 8vo. 468 pp. Brunswick, 1846.
 ——— Die Chemie in ihrer Anwendung auf Agricultur und Physiologie. Vol. II. Naturgesetze des Feldbaues. 8vo. Brunswick, 1862.
- MULDER, G. J. Die Chemie der Ackerkrüme. 2 vols. 8vo. Leipsig, 1862.
- NORMANDY, A. The Farmer's Manual of Agricultural Chemistry, with Instructions respecting the Diseases of Cereals, and the Destruction of the Insects which are Injurious to those Plants. 12mo. 218 pp. London, 1853.
- OLCOTT, H. S. Outlines of the First Course of Yale Agricultural Lectures, with an Introduction by John A. Porter. 12mo. 186 pp. New-York, 1860.
- STEPHENS, H. Katechismus des practisches Ackerbaues. Translated by Wilhelm Hamm. 12mo. 110 pp. Leipsig, 1857.
- TOPHAM, J. Chemistry made Easy, for the Use of Farmers. 12mo. 44 pp. New-York, 1852.
- WIESNER, Julius. Untersuchungen über die herbstliche Entlaubung der Holzgewächse. 8vo. Vienna, 1871.
See, also, Agriculture.

PERIODICAL PUBLICATIONS.

- THE BOSTON Journal of Chemistry; devoted to the Science of Home Life, the Arts, Agriculture and Medicine.
 Edited by JAMES R. NICHOLS and W. J. ROLFE. 4to. Monthly. One vol. a year. 1867 to date.
 Vols. IV., V., VI., VII., 1870 to 1873.
- JAHRESBERICHT über die Fortschritte auf dem Gesamtgebiete der Agricultur-Chemie.
 Edited, at different times, by ROBERT HOFFMAN, E. PETERS, TH. DIETRICH, J. FITTBOGEN, J. KÖNIG. 8vo. Annually. Berlin, 1855 to date.
 Vols. I. to XV., 1858 to 1874. Vols. XIII. to XV., 1870 to 1872, collectively, in three vols. :—
 Vol. 1. Die Chemie des Bodens, der Luft und des Düngers. Edited by Th. Dietrich.
 Vol. 2. Die Chemie der Pflanze. Edited by J. Fittbogen.
 Vol. 3. Die Chemie der Thiernährung. Chemisches Technologie der landwirtschaftlichen Nebengewerbe. Edited by Josef König.
- LE GENIE Industriel. Revue des Inventions Françaises et Étrangères. Annales des Progrès de l'Industrie Agricole et Manufacturière, Biographie des Inventions, &c., par Armengaud Frères.
 8vo. Two vols. a year. Paris, 1851 to date.
 Vols. XXIII. to XXXIV., 1862 to 1867.
See, also, Periodical Publications under General and Inorganic Chemistry, p. 220.

ANIMAL AND MEDICAL CHEMISTRY.

- ANTISELL, T. Address, introductory to the Course of Lectures in the Chemical Department of Vermont Medical College, delivered before the Class of Session of 1854. Vol. XXVIII., Pamphlets. Octavo series. 8vo. Woodstock, 1854.
- ATTFIELD, J. Chemistry. General, Medical and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia. From the English edition. 12mo. 552 pp. Philadelphia, 1871.
- BEARD, George M. Stimulants and Narcotics, Medically, Philosophically and Morally Considered. 12mo. New-York, 1871.
- BIRD, Golding. Urinary Deposits. Their Diagnosis, Pathology and Therapeutical Indications. Edited by E. L. Birkett. 8vo. 382 pp. Philadelphia, 1863.
- BOWMAN, J. E. Practical Handbook of Medical Chemistry. Edited by C. L. Bloxam. 8vo. 351 pp. Philadelphia, 1863.
- CHANDLER, C. F. Report upon the Sanitary Chemistry of Water, and Suggestions with Regard to the Selection of the Water Supply of Towns and Cities. 8vo. Cambridge, 1875.
- CHRISTISON, Robert. A Treatise on Poisons. 8vo. 985 pp. Edinburgh, 1845.
- DRAPER, Henry. On the Changes of Blood-Cells in the Spleen. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 9 pp. New-York, 1858.
- ELLIS, Daniel. An Inquiry into the Changes Induced on Atmospheric Air, by the Germination of Seeds, the Vegetation of Plants, and the Respiration of Animals. 12mo. 246 pp. Edinburgh, 1807.
- FLANDRIN, Ch. Traité des Poisons, ou Toxicologie. 3 vols. 8vo. Paris, 1846-1853.
- GARDNER, D. P. An Introductory Lecture on the Relations of Chemistry to the Vital Forces, delivered in the Philadelphia College of Medicine, Philadelphia, 1847. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 11 pp. Philadelphia, 1848.
- GORUP-BESANEZ, E. von. Anleitung zur qualitativen und quantitativen Zoochemischen-Analyse. 8vo. 420 pp. Nuremberg, 1854.
- The same as above: Third edition. 8vo. 497 pp. Heidelberg, 1871.
- Chemische Untersuchung des Mineralwassers zu Steben, im Baierischen Voigtlande. Vol. X., Pamphlets. Quarto series. 4to. 30 pp. 1851.
- Lehrbuch der Physiologischen Chemie. 8vo. 819 pp. Brunswick, 1862.
- HASEMANN, Theodor and A. Handbuch der Toxicologie. 8vo. 978 pp. Berlin, 1862.

- HASSELT, A. W. M. von, and Henkel, J. B. Handbuch der Giftlehre. 2 vols. 8vo. Brunswick, 1862.
- HUNT, T. Sterry. Recherches sur les Eaux Minerales du Canada. Vol. VIII., Pamphlets. Quarto series. 4to. 5 pp. 1841.
- JONES, J. Abstract of Experiments upon the Physical Influences exerted by Living, Organic and Inorganic Membranes, upon Chemical Substances passing through them by Endosmose. Vol. XXIX., Pamphlets. Octavo series. 8vo. 8 pp. Philadelphia, 1855.
- KENNEDY, Alfred L. Practical Chemistry, a branch of Medical Education. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 11 pp. Philadelphia, 1852.
- KLETZINSKY, Vicenz. Compendium der Biochemie. 8vo. 84 pp. Vienna, 1858.
- KROMAYER, Augusta. Die Bitterstoffe und Krazendschmeckenden Substanzen des Pflanzenreichs. 8vo. 146 pp. Erlangen, 1861.
- LEHMANN, C. G. Physiological Chemistry. Translated by George E. Day, and Edited by R. E. Rogers. 2 vols. 8vo. Philadelphia, 1855.
- LIEBIG, Justus von. Animal Chemistry. Edited by G. W. Gregory. 12mo. 356 pp. New-York, 1842.
- Chemische Briefe. 8vo. 668 pp. Heidelberg, 1851.
- Chimie Organique appliquée à la Physiologie Végétale et à L'Agriculture, suivie d'un Essai de Toxicologie par C. Gerhardt. 8vo. 392 pp. Paris, 1841.
- Die Chemie in ihren anwendung auf Agricultur und Physiologie. 8vo. 468 pp. Brunswick, 1846.
- Die Chemie in ihrer Anwendung auf Agricultur und Physiologie. Vol. I. Der Chemischen Process der Ernährung der Vegetabilien. 8vo. Brunswick, 1862.
- Ueber Gährung über Quelle der Muskelkraft. 8vo. 138 pp. Leipsig, 1870.
- MARCET, W. On the Immediate Principles of the Human Excrements in the Healthy State. Vol. VIII., Pamphlets. Quarto series. 4to. 11 pp., I. plate. 1857.
- MOHR, Redwood and Proctor. Practical Pharmacy. 8vo. 576 pp. Philadelphia, 1849.
- MORFIT, Campbell, and Morfit, Clarence. Chemical and Pharmaceutical Manipulations. 8vo. 620 pp. Philadelphia, 1857.
- NEUBAUER, C., and Vogel, J. Anleitung zur Qualitativen und Quantitativen Analyse des Harnes zum gebrauchte für Medeciner und Pharmaceuten. 8vo. 294 pp. Weisbaden, 1856.
- ODLING, William. A Course of Practical Chemistry. 12mo. 241 pp. London, 1865.
- OLSSON, P. Nova genera parasitantia Copepodorum et Platelminthium. Vol. X., Pamphlets. Quarto series. 4to. 6 pp., I. plate.
- ORFILA, M. J. B. Eléments de Chimie appliquée à la Medicine et aux Arts. Fifth edition. 2 vols. 8vo. Paris, 1831.
- OTTO, Friederich Julius. Anleitung zur Ausmittlung der Gift. Third edition. 8vo. 111 pp. Brunswick, 1856.

- PHILIP, A. P. W. *The Laws of the Vital Functions.*
8vo. 335 pp. Philadelphia, 1818.
- PIERCE, C. H. *Examination of Drugs, Medicines, Chemicals, &c.*
12mo. 264 pp. Philadelphia, 1853.
- REICH, Edward. *Medicinische Chemie.*
2 vols. 8vo. Erlangen, 1858.
- SOUBERAIN, J. Léon. *Nouveau Dictionnaire des Falsifications et des Alterations des Aliments, des Medicaments et de Quelques Produits Employés dans les Arts, L'Industrie et L'Economie Domestique.*
8vo. 634 pp. Paris, 1874.
- SMITH, J. C. *The Effect of the Nitrous Vapor, in Preventing and Destroying Contagion.* 8vo. 174 pp. Philadelphia, 1799.
- TAYLOR, A. S. *Poisons in Relation to Medical Jurisprudence.*
Second American from Second London edition.
8vo. 755 pp. Philadelphia, 1859.
- TRALL, R. T. *Tobacco; its History, Nature and Effects, with Facts and Figures for Tobacco Users.* 12mo. New-York, 1854.
- ULTZMANN, Robert, and Hoffman, Karl Berthold. *Anleitung zur Untersuchung des Harnes.* 12mo. 133 pp. Vienna, 1871.
- *Atlas der Physiologischen und Pathologischen Harnsedimente.*
8vo. 44 tables. Vienna, 1872.
- VAN HASSELT, A. W. M. *Handbuch der Giftlehre. In Zwei Theilen. Erste Theil. Allgemeine Giftlehre und Die Gift des Pflanzenreichs. Zweite Theil. Die Thiergifte und die Mineralgifte. Aus dem Holländischen frei bearbeitet mit Zusätzen versehen von J. B. Henkel.*
2 vols. 8vo. Brunswick, 1862.
- WOOD, G. B., and Bache, F. *The Dispensary of the U. S. of America.* Twelfth edition.
8vo. 1704 pp. Philadelphia, 1865.
- WORMLEY, Theodore G. *A Treatise on the Micro-Chemistry of Poisons.* 8vo. 702 pp., XIV. plates. New-York, 1869.
- ZIEMSEN, H. v. *Handbuch der Speciellen Pathologie und Therapie. Erster Band.* 8vo. 552 pp. Leipzig, 1874.
- DRUGS AND MEDICINES.—Attfield, J.; Bowman, J. E.; Gorup-Besanez, E.; Hunt, T. Sterry; Kromayer, Augusta; Pierce, C. H.; Reich, Edward; Souberain, J. Léon; Wiesner, Julius; Ziemssen, H. v.
- POISONS.—Christison, Robert; Haseman, Theodore and A.; Hasselt and Henkel; Liebig, Justus von; Otto, F. J.; Taylor, A. S.; Wormley, Theodore; Van Hasselt, A. W. M.
- URINE.—Bird, Golding; Flandrin, Ch.; Kenbauer, C., and Vogel, J.; Ultzmann, Robert, and Hoffmann, Karl Berthold.
- WINES AND LIQUORS.—*See under Chemical Technology.*

PERIODICAL PUBLICATIONS.

AMERICAN Medical and Philosophical Register; or, Annals of Medicine, Natural History, Agriculture and the Arts.
Vol. I., 1814.

ANNALEN der Pharmacie.

Edited by J. LIEBIG, F. WÖHLER, H. KOPP, E. ERLERMAYER and J. VOLHARD.
12mo. Four vols. a year. Heidelberg and Leipzig, 1832 to date.

Vols. I. to XXXII., 1832 to 1839. From 1840, title changed to
ANNALEN DER CHEMIE UND PHARMACIE.

Vols. XXXIII. to CXXXVI.; CXLI. to CLVI.; and CLIX.
to CLXXVII., 1840 to 1875.

Supplemental Volumes, I., II., 1861 to 1863; III., (hefts, 1, 2,) 1864; V., VI., 1867 to 1868; VIII., 1872.

Index Volumes, (subjects and authors.) Vol. 1 for Vols. I. to C., 1832 to 1856; Vol. 2, for Vols. CXVII. to CLXIV., and Supplemental Volumes I. to VIII.—1863 to 1874.

JOURNAL de Pharmacie et de Chimie contenant les Travaux de la Société de Pharmacie, une Revue Medicale et une Revue des Travaux Chimiques publiés à l'Étranger.

Third Series. Vol. XXVI., July to December, 1854.

Fourth Series. Vols. XV. to XVIII., XX., XXI., January, 1872, to June, 1875.

MAGAZIN für Pharmacie und die darin einschlagenden Wissenschaften.

Edited by G. F. HANLE, 1823; L. GEIGER, 1824-1831. 12mo. Four vols. a year. Karlsruhe, Heidelberg, 1823 to 1831.

Vols. I. to XXXVI., 1823 to 1831. This journal was succeeded by the *Annalen der Pharmacie*, *which see*.

PHARMACEUTISCHES Central Blatt.

8vo. Leipzig, 1830 to 1855.

Vols. I. to XX., 1830 to 1849. Vols. XXI. to XLI., 1850 to 1855, under title *Chemisch-Pharmaceutisches Central Blatt*.

Zweite Folge: *Chemisches Central Blatt*. Repertorium für reine, pharmaceutische, physiologische und technischen Chemie.

8vo. Weekly. One vol. a year. 1856 to 1869.

Vols. I. to XIV., 1856 to 1869.

Dritte Folge: *Chemisches Central Blatt*. Repertorium für reine, pharmaceutische, physiologische und technischen Chemie.

8vo. Weekly. One vol. a year. 1870 to date.

Vols. I. to V., 1870 to 1874. Vol. VI., 1875, January 2, to June 26.

REVUE des Cours Scientifiques de la France et de L'Étranger. Physique, Zoologie, Botanique, Anatomie, Physiologie, Géologie, Paléontologie, Médecin.

4to. Weekly. One vol. a year. Paris, 1863 to date.

First Series, (1863 to 1870.)

Vols. I. to V., 1864 to 1868.

Second Series: *Revue Scientifique de la France et de L'Étranger*.

Two vols. (two parts each) a year. 1871 to date.

Vols. I. to VII., 1871 to 1874. Vol. VIII., 1875, Jan. to June.

See, also, Periodical Publications, under General and Inorganic Chemistry, p. 220.

CHEMICAL TECHNOLOGY.

- ACCUM, Frederick. A Practical Treatise on Gas Light. Fourth edition. 8vo. 190 pp. London, 1818.
- AMERICAN Ozone Co. Articles of Incorporation; with some Remarks on Ozone. Vol. XVI., Pamphlets. Octavo series.
- AUERBACH, G. Das Anthracene und Seine Derivate. 8vo. 164 pp. Berlin, 1873.
- BAILEY, J. W. Chemical Notes on Gunpowder and its Materials. Selected for the Use of the U. S. Cadets. 4to. 14 pp. 1838.
- BAUER, Alexander, and Hinterberger, F. Lehrbuch der Chemischen Technik. 8vo. 574 pp. Vienna, 1859.
- BERTHOLLET, C. L. Elements de l'Art de la Teinture. 2 vols. 12mo. Paris, 1791.
- BESSEMER, Henry. On a New System of Manufacturing Sugar from the Cane. 8vo. 61 pp. 1852.
- BISHOP, J. L. A History of American Manufactures from 1608 to 1860. 3 vols. 8vo. Philadelphia, 1866.
- BOLLEY, P., et Kopp, E. A Manual of Technical Analysis. 12mo. 426 pp. London, 1857.
- Traité des Matieres Colorantes Artificielles dérivées du Goudron de Houille, Traduit de L'Allemand et Augmenté des travaux les plus récents par le Dr. L. Gautier. 8vo. 444 pp. Paris, 1874.
- BOOTH, J. C., and Morfit, C. On Recent Improvements in the Chemical Arts. 8vo. 216 pp. Washington, 1852.
- BOWDITCH, W. R. The Analysis, Technical Valuation, Purification and Use of Coal Gas. 8vo. 300 pp. London, 1867.
- BRANDE, W. T. Lectures on the Arts connected with Organic Chemistry. 16mo. 382 pp. London, 1854.
- BRITISH Patent Office. Abridgments of Specifications of Patents relating to—
- Bleaching, Dyeing and Calico Printing. 1617–1857. 770 pp. 1859.
- Gas, the Production and Applications of. 584 pp. 1860.
- India Rubber and Gutta Percha, including Air, Fire and Water Proofing. 704 pp. 1859.
- Oils, Vegetable and Mineral, including Lubricants, Candles and Soap. 668 pp. 1865.
- Photography. Parts I. and II. 1861–1867.
- Pottery. 1626–1815. 179 pp. 1863.
- Preservation of Food. 46 pp. 1857.
- Production and Applications of Gas. 1681–1858. 584 pp. 1860.
- 16mo. London.

- BUNSEN, R. Gasometrische Methoden.
24mo. 305 pp. Brunswick, 1857.
- Gasometry. 8vo. 298 pp. London, 1857.
- and Roscoe. Photo-Chemical Researches.
4to. London, 1857.
- BYRNE, J. N. L. The Complete Practical Brewer.
12mo. 199 pp. Philadelphia, 1869.
- CAPRON, Félicien. Nouveau Manuel Complet du Fabricant de
Bleus et Carmins d'Indigo. 24mo. 76 pp. Paris, 1858.
- CHAMPAGNE, of What, How, and Where it is made.
8vo. Buffalo, 1856.
- CHANDLER, Charles F. Dangerous Kerosene. A Report to the
Metropolitan Board of Health.
8vo. 8 pp. New-York, 1868.
- Report on Water for Locomotives and Boiler Incrustations.
Vol. IV., Pamphlets. Octavo series. 8vo. 35 pp. New-York, 1865.
- Report upon the Sanitary Chemistry of Water, and Sugges-
tions with Regard to the Selection of the Water Supply of
Towns and Cities. 8vo. Cambridge, 1875.
- Report on Petroleum as an Illuminator. *From Report of*
Met. Board of Health, 1870. Vol. XVI., Pamphlets. Octavo series.
8vo. 110 pp. New-York, 1871.
- Report on the Waters of the Hudson River, together with
an Analysis of the same, made to the Water Commissioners
of the City of Albany. Vol. XVII., Pamphlets. Octavo series.
8vo. 25 pp. Albany, 1872.
- CHAPTAL, J. A. Chimie Appliquée Aux Arts.
4 vols. 8vo. Paris, 1807.
- CLEGG, Samuel, Jr. A Practical Treatise on the Manufacture and
Distribution of Coal Gas. Fifth edition.
4to. 411 pp. London, 1868.
- COLBURN, Zerah. The Gas Works of London.
8vo. 86 pp. New-York, 1868.
- CROOKES, William. On the Manufacture of Beet Root Sugar in
England and Ireland. 12mo. 290 pp. London, 1870.
- CUTBUSH, James. A System of Pyrotechny, designed for Exhibi-
tion and for War. 8vo. 612 pp. Philadelphia, 1825.
- DIMOND, E. W. The Chemistry of Combustion, Applied to the
Economy of Fuel, with Special Reference to the Construction
of Fire Chambers for Steam Boilers.
8vo. 162 pp. Worcester, 1867.
- DUBIEF, L. F. Sur le Manufacture de Cidre et de Poire. Rédigé
par F. Malepeyre. 12mo. 275 pp. Paris, 1859.
- DUMAS, Jean B. Traité de Chimie appliquée aux Arts.
7 vols. 8vo. Paris, 1828-1844.
- DUSSAUCE, H. A General Treatise on the Manufacture of Soap.
8vo. 807 pp. Philadelphia, 1869.
- A Practical Treatise on the Fabrication of Matches, Gun
Cotton, Colored Fires and Fulminating Powders.
12mo. 336 pp. Philadelphia, 1864.
- A Treatise on Coloring Matters derived from Coal Tar.

DYER and Color Maker's Companion.

12mo. 104 pp. Philadelphia, 1850.

DYEING and Calico Printing—A Practical Treatise on, including the Latest Inventions and Improvements; with an appendix comprising definitions of chemical names, with tables of weights, measures, thermometers, hydrometers, &c., by An Experienced Dyer. With a Supplement, containing Recent Discoveries in Color Chemistry, by Robert Macfarlane.

8vo. 729 pp., X. plates. New-York, 1860.

ENTELWEIN, J. A. Beschreibung der Erbauung und Einrichtung einer Vereinigten Brauerei und Branntwein-brennerei auf dem Land.

4to. 68 pp. Berlin, 1802.

EXPOSITION Universelle de Paris, 1867.

Berichte über die Weltausstellung zu Paris im Jahre, 1867. Band III. 2. Nahrungsmittel und Getränke.

FONTENELLE, J. Nouveau Manuel Complet du Blanchissement.

2 vols. 24mo. Paris, 1855.

—— Theoretisch-practisches Handbuch der Oelfabrication und Oelreinigung. Auf den Standpunct des Jahres, 1852, gebracht von Emanuel Schreiber.

16mo. 267 pp., XIV. plates. Weimar, 1853.

GENTELE, J. G. Lehrbuch der Farbenfabrikation.

8vo. 351 pp. Brunswick, 1860.

GILLINDER, W. T. Treatise on the Art of Glass Making, containing 272 Practical Receipts for Flint, Colored, Crown, German, Sheet, Plate and Bottle Glass, to which is added a Treatise on the Alkalies, Oxides, Silex, &c., used in the Mixing and Coloring of Glass; also, General Instructions for the Planning and Managing of the Flint and Colored Glass Manufacture.

8vo. Birmingham, 1874.

GOESSMANN, C. A. Contributions to the Chemistry of Common Salt: with particular reference to our Home Resources.

Vol. XVI., Pamphlets. Octavo series.

8vo. 12 pp. 1870.

GORUP-BESANEZ, E. von. Chemische Untersuchung des Mineralwassers zu Steben, im Baierischen Voigtlande. Vol. X., Pamphlets. Quarto series.

4to. 30 pp. 1851.

GROTHE, Hermann. Katechismus der Bleicherei, Färberei und des Zeugdruckes.

12mo. 234 pp. Leipsig, 1862.

—— Katechismus der Spinnerei, Weberei und Appretur.

24mo. 144 pp. Leipsig, 1861.

HANSARD, Thomas C., Tomlinson, Charles, and others. History of the Processes of Manufacture and Uses of Printing, Gas-Lights, Pottery, Glass and Iron. *From the Encyclopedia Britannica.*

12mo. 392 pp. New-York, 1864.

HARDWICK, T. F. Manual of Photographic Chemistry. Seventh edition.

8vo. 593 pp. London, 1864.

HASSALL, A. H. Food and its Adulterations.

8vo. 659 pp. London, 1855.

HAYES, John L. Notes on Indigo.

8vo. 79 pp. Boston, 1873.

—— Scientific Researches.

8vo. 36 pp. Albany, 1852.

—— The Permeability of Metals to Mercury.

8 vo. 14 pp.

- HUGHES, Samuel. A Treatise on Gas Works. 8vo. 336 pp. London, 1866.
- JOHNSON, James F. W. The Chemistry of Common Life. 2 vols. 12mo. New-York, 1855.
- KNAPP, F. Chemical Technology. Edited by E. Ronalds and T. Richardson. First American edition, with notes and additions by W. R. Johnson. 2 vols. 8vo. Philadelphia, 1848, 1849.
- LANG, Viktor von. Versuch eine Monographie des Bleivitriols. Vol. XXVIII., Pamphlets. Octavo series. 8vo. 54 pp. Vienna, 1859.
- LANKESTER, E. Good Food. 16mo. 64 pp. London, 1867.
- LE BEUF. L'Amelioration des Liquides. 24mo. 261 pp. Paris, 1862.
- LENG, Heinrich. Vollständiges Handbuch der Glasfabrication nach allen ihren Haupt, und Nebenzweigen. Bearbeitet von Dr. T. A. Schmidt. 12mo. 740 pp. Weimar, 1854.
- LETHEBY, H. Lectures on Food. 8vo. 277 pp. London, 1870.
- MACADAM, Stevenson. The Chemistry of Common Things. 8vo. 184 pp. London, 1867.
- MARTIUS, J. Matzdorff. Katechismus der Galvanoplastik. 12mo. 104 pp. Leipsig, 1868.
- MITCHEL, J. A Treatise on the Falsification of Food. 12mo. 334 pp. London, 1848.
- MORDECAI, A. Reports of Experiments on Gunpowder. 8vo. 328 pp. Washington, 1845.
- MORFIT, Campbell, and Morfit, Clarence. Chemical Examination of the Commercial Varieties of Common Salt. 8vo. 9 pp. 1858.
- The Arts of Tanning, Currying and Leather Dressing. 8vo. 537 pp. Philadelphia, 1852.
- MUNSELL, J. A Chronology of Paper and Paper Making. Third edition. 8vo. 174 pp. Albany, 1864.
- MUSPRATT, Sheridan. Chemistry, Theoretical, Practical and Analytical, as applied to the Arts and Manufactures. 2 vols. 4to. London, 1860.
- Encyklopädisches Handbuch der Technischen Chemie. Vol. I. Aether-Cyan. Edited by D. F. Stohman, 1865. Vol. II. Dextrin-Gummi. “ “ D. F. Stohman, 1866. Vol. III. Harze-Mangan. “ “ Bruno Kerl, 1868. Vol. IV. Natrium-Strontium. Edited by Bruno Kerl, 1869. Vol. V. Textilindustrie.Zirkonium. Edited by Bruno Kerl, 1870. Vol. VI. Zucker-Nachträge. Edited by Bruno Kerl, 1870. 6 vols. Imp. 8vo. (Illustrated.) Brunswick.
- Theoretische, practische und analytische Chemie in Anwendung auf Kunst und Geyerbe. Dritte Auflage. Frei bearbeitet von Bruno Kerl and F. Stohman. Vol. I. Aether to Butter und Milch. Vol. II. Cadmium to Firnis. Vol. III. Lieferungs, 1, 2, 3. 2 vols. 4to. (Illustrated.) Brunswick, 1874.

- MUSPRATT, J. S., and Hoffmann, A. W. Ueber neue Bildungsweisen des Anilins. 12mo. II. plates. Giessen, 1844.
- NAPIER, James. A Manual of the Art of Dyeing. 8vo. 405 pp. Glasgow, 1853.
- NEUMAN, Casper. The Chemical Works of, with large additions containing the Later Discoveries and Improvements in Chemistry and the Arts depending thereon, by William Lewis. 2 vols. 8vo. London, 1773.
- NORMANDY, A. A Handbook of Commercial Analysis. Second edition. 8vo. 64 pp. London, 1865.
- ORFILA, M. J. B. Éléments de Chimie appliquée à la Médecine et aux Arts. Fifth edition. 2 vols. 8vo. Paris, 1831.
- OTT, Adolph. The Art of Manufacturing Soap and Candles. 12mo. 193 pp. Philadelphia, 1867.
- PAUL, Benjamin H. A Manual of Technical Analysis. Founded upon the Handbuch der Technisch-Chemischen Untersuchungen. 12mo. 426 pp. London, 1857.
- PAYEN, A. Précis de Chimie Industrielle. Fifth edition. Vol. I. 8vo. 704 pp. Paris, 1867.
- PITT, John. How to Brew Good Beer. Second edition. 8vo. 148 pp. London, 1864.
- PROCEEDINGS at the Centennial of Chemistry, held August 1, 1874, at Northumberland, Pa. 4to. 209 pp. Philadelphia, 1875.
- PROTEAUX, A. A Practical Guide for the Manufacturing of Paper and Boards. Translated by H. Paine; to which is added a chapter on the Manufacture of Paper from Wood in the United States, by Henry T. Brown. 8vo. 292 pp. Philadelphia, 1866.
- RAVON et Malpeyre. Petit Manuel du Négociant d'Eau-de-Vie, Liquoriste, Marchand-de-Vin et Distillateur. 32mo. Paris.
- REED, William. The History of Sugar and Sugar Yielding Plants. 12mo. 206 pp. London, 1866.
- REIMANN, M. Aniline and its Derivatives. 8vo. 164 pp. London, 1868.
- RENWICK, *Prof.* The Applications of Chemistry to the Arts. Lecture Notes, Printed at the Cost and For the Use of the Junior Class of Columbia College, New-York, 1851 and 1852. 8vo. 79 pp. New-York, 1851.
- RONALDS, Edmund; Richardson, Thomas; and Watts, Henry. Chemical Technology; or, Chemistry in its Applications to the Arts and Manufactures; with which is incorporated a revision of Dr. F. Knapp's "Technology." Second edition. Vol. I. Part 2. Fuel, Destructive Distillation and Artificial Illumination. 836 pp. 1855.
- Part 3. Acids, Alkalies, Salt, Soaps, &c. 771 pp. 1863.
- Part 4. Aluminum, Sodium, Soda, Phosphorus, Matches, Borax, Artificial Mineral Waters, Gunpowder, Gun Cotton, Fireworks, &c. 611 pp. 1865.
- Part 5. Prussiate of Potash, Oxalic, Tartaric and Citric Acids. Appendix.—Patents, &c. 894 pp. 1867.

- RONALDS, Edmund, *and others*. Chemical Technology, &c. :
 Vol. II. Glass, Alum, Potteries, Cements, Gypsum, &c.
 491 pp. 1848.
 Vol. III. Food. 458 pp. 1851.
 7 vols. 8vo. London, 1867.
- SCHILLING, N. H. Statistische Mittheilungen über die Gas-Anstalten Deutschlands, &c. 8vo. 372 pp. Munich, 1868.
- SCHMIDT, Carl Heinrich. Die neuesten wichtigsten Fortschritte, Erfindungen und Verbesserungen in der Farbenfabrikation. 16 mo. 240 pp., IV. plates. Weimar, 1869.
- SCHNAUS, J. Katechismus der Photographie. 12mo. 148 pp. Leipsig, 1864.
- SCHUTZENBERGER, P. Die Farbestoffe mit besonderer Berücksichtigung ihre Anwendung in der Färberei und Druckerei. Autorisirte deutsche Uebertragung bearbeitet von Dr. Hermann, Schroeder. 2 vols. 8vo. Berlin, 1873.
 Vol. I. 543 pp., XII. wood cuts, I. plate and X. *pattern plates*. 1868.
 Vol. II. 623 pp., XXXVIII. *pattern plates*.
- SELLERS, John. The Color Mixer. 12mo. 155 pp. Philadelphia, 1865.
- SHERMAN, W. H. Vermilion by a New Process—Its Photographic Properties. 2 pp. 1872.
- SLATER, J. W. The Manual of Colors and Dye Wares. 12mo. 217 pp. London, 1870.
- SMITH, J. L. The Progress and Condition of Several Departments of Industrial Chemistry. 8vo. 146 pp. Washington, 1869.
- SOUBEIRAN, J. Léon. Nouveau Dictionnaire des Falsifications et des Alterations des Aliments, des Medicaments et de Quelques Produits Employés dans les Arts, L'Industrie et L'Economie Domestique. 8vo. 634 pp. Paris, 1874.
- STEWART, F. L. Sorghum and Its Products. 12mo. 240 pp. Philadelphia, 1867.
- TREATISE on the Manufacture, Imitation and Reduction of Foreign Wines, Brandies, Gins, Rum, &c., and all kinds of Domestic Liquors. Based upon the French System. By a Practical Chemist. 12mo. 208 pp. Philadelphia, 1860.
- TSCHELNITZ, S. Farben Chemie; ins besonderer Oel und Wasserfarben. 8vo. 302 pp. Vienna, 1857.
- URE, Andrew. Dictionary of Arts, Manufactures and Mines. 2 vols. 8vo. New-York, 1863.
 ——— Supplement. 8vo. New-York, 1864.
- WAGNER, Rudolph. A Handbook of Chemical Technology. Translated and edited from the Eighth German edition, with extensive additions, by William Crookes. 8vo. 745 pp. New-York, 1872.
- WALKHOFF, Louis. Der Practische Rübenzuckerfabricant und Raffinadeur. Ein Lehr-und Hülfsbuch. 8vo. 900 pp. Brunswick, 1867.

- WARREN, C. M. Researches on the Volatile Hydrocarbons. Two Memoirs.
- I. On the Volatile Hydrocarbons from Coal Tar, Naphtha, Oil of Cumin and Cuminic Acid.
 - II. On the Influence of C. H. upon the Boiling Points in Homologous Series of Hydrocarbons and in some series of their Derivatives; with Critical Observations on Methods of Taking Boiling Points. 8vo. 42 pp. Cambridge, 1865.
- and Storer, F. H. Researches on the Volatile Hydrocarbons. Two Memoirs. I. Naphtha from Lime Soap. II. Naphtha from Rangoon Petroleum. Vol. V., Pamphlets. Quarto series. 4to. 41 pp. Cambridge, 1866.
- WATER-GAS PROCESS. History and Value of the. Vol. XVI., Pamphlets. Octavo series. 8vo. 42 pp. New-York, 1864.
- WEINGEHEIMNISSE. 8vo. 48 pp. Nuremburg, 1858.
- WEINGEHEIMNISSE. Zusammenstellung alle bisher oft sehr geheim gehaltener Mittel zur natürlichen und künstlichen Weinbereitung jeder Gattung. 12mo. 123 pp. Nuremburg, 1858.
- WELLS. Principles and Applications of Chemistry. Sixth edition. 8vo. 515 pp. New-York, 1863.
- WETHERILL, C. M. Examination of Fusil-Oil from Indian Corn and Rye. Vol. XVI., Pamphlets. Octavo series. 8vo. 7 pp.
- WIESNER, Julius. Gummiarten. Harze und Balsame. Die technischen verwendeten. 8vo. 205 pp. Erlangen, 1869.
- WINES. A Treatise on Foreign Wines, &c. 12mo. 208 pp. Philadelphia, 1860.
- WURTZ, Karl Adolph. Dictionnaire de Chimie, Pure et Appliquée. Vol. I. Part 1. A.-B. 8vo. 686 pp. 1869.
Part 2. C.-G. 8vo. 973 pp. 1873.
Vol. II. Part 1. H.-Phe. 8vo. 920 pp. 1873.
Part 2. Phe.-Rue. 1874. 4 vols. 8vo. Paris.
- ZUCHOLD, E. A. Bibliotheca Chemica, 1840-1858. 8vo. 342 pp. Gottingen, 1859.

See, also, International Expositions.

THE ARTS OF BLEACHING AND DYEING.—Auerbach, G., and Hinterberger, F.; Berthollet, C. L.; Bolley, P., and Kopp, E.; British Patent Office; Capron, Felicien; Dussauce; Dyer and Color Makers' Companion; Dyeing and Calico Printing; Fontenelle, J.; Gentele, J. G.; Grothe, Hermann; Hayes, John L.; Muspratt, J. S.; Muspratt, J. S., and Hofmann, A. W.; Napier, James; Reimann, M.; Schmidt, Carl Heinrich; Schutzenberger, P.; Sellers, John; Slater, J. W.; Tschelnitz, S.

PERIODICALS.—Färber Zeitung.

FOOD.—British Patent Office; Exposition Universelle de Paris; Hassall, A. H.; Lankester, E.; Letheby, H.; Mitchell, J.; Ronalds, Richardson, &c., Vol. III.; Souberain, J. Léon.

FUEL.—*See under Metallurgy*, p. 262.

GLASS MAKING.—Gillinder, W. T.; Hansard, Tomlinson, and others; Hughes, Samuel; Leng, Heinrich; Ronalds, Richardson, &c. Vol. II.

ILLUMINATING GAS.—Accum, Frederick ; Bowditch, W. R. ; British Patent Office ; Bunsen, R. ; Clegg, Samuel, Jr. ; Colburn, Zerah ; Hansard, Tomlinson, *and others* ; Hughes, Samuel ; Ronalds, Richardson, &c. Vol. I., Part 2 ; Schilling, N. H. ; Water-Gas Process.

PERIODICALS.—The American Gas Light Journal ; The Journal of Gas Lighting and Water Supply.

INDIA RUBBER.—British Patent Office ; Wiesner, Julius.

OILS.—British Patent Office ; Chandler, C. F. ; Fontenelle, J.

PAPER.—Munsell, J. ; Proteaux, A.

PHOTOGRAPHY.—British Patent Office ; Bunsen and Roscoe ; Hardwick, T. F. ; Schnauss, J. ; Sherman, W. H.

POISONS.—*See under* Animal and Medical Chemistry, p. 247.

SOAP AND CANDLES.—British Patent Office ; Dussauce, H. ; Ott, Adolph ; Warren, C. M.

SUGAR.—Bessemer, Henry ; British Patent Office ; Crookes, William ; Evans, W. J. ; Gentile, J. G. ; Reed, William ; Stewart, F. L. ; Walkoff, Louis.

URINE.—*See under* Animal and Medical Chemistry, p. 247.

WINES AND LIQUORS.—Byrne, Oliver ; Champagne ; Entelwein, J. A. ; Le Beuf ; Pitt, John ; Ravon et Malpeyre ; Treatise on the Manufacture, Reduction, &c. ; Weingeheimnisse ; Wetherill, C. M. ; Wines.

GENERAL REFERENCE.—Bauer, Alexander, and Hinterberger, F. ; Brande, W. T. ; Bishop, J. L. ; Chaptal, I. A. ; Knapp, F. ; Muspratt, Sheridan ; Neumann, Casper ; Normandy, A. ; Orfila, M. J. B. ; Paul, Benjamin H. ; Payen, A. ; *Precis de Chimie Industrielle* ; Ure, Andrew ; Ronalds, Richardson and Watts ; Wagner, Rudolph ; Wells ; Wurtz, Adolph.

PERIODICAL PUBLICATIONS.

THE AMERICAN Artizan and Patent Record. A Weekly Journal of Arts, Mechanics, Manufactures, Mining, Engineering and Repertory of Patents.

Folio. Weekly. Two vols. a year. New-York, 1864 to 1874.

Second Series, (1865 to 1872.)

Vols. I., VI., XVI., XVII., XVIII., 1865—1872.

Third Series, (1872 to 1874.)

Vol. I., 1872.

THE AMERICAN Chemist. A Monthly Journal of Theoretical and Technical Chemistry.

Edited by C. F. & W. H. CHANDLER. 4to. Monthly. One vol. a year. New-York, 1870 to date.

Vols. I. to V., July, 1870, to June, 1875.

THE AMERICAN Repertory of Arts, Sciences and Manufactures.

8vo. Two vols. a year. New-York.

Vols. II., III., IV., 1840 to 1842.

ANNALES du Conservatoire Imperial des Arts et Metiers.

Vol. VII., 1866 to 1867. Vol. VIII., 1870.

ANNUAL of Scientific Discovery ; or, Year Book of Facts in Science and Art, exhibiting the Most Important Discoveries in Mechanics, the Useful Arts, Natural Philosophy, Chemistry, Astronomy, Meteorology, Zoology, Botany, Mineralogy, Geography and Antiquities, &c., for the years

1850 to 1864. Edited by David A. Wells.

1865, 1866, (one vol.) Edited by Samuel Kneeland.

1870, 1871. Edited by John Trowbridge.

18 vols. 12mo. Boston.

ANTHONY'S Photographic Bulletin.

Vols. IV., V., 1873, 1874. Vol. V., 1875, January to June.

THE BOSTON Journal of Chemistry ; devoted to the Science of Home Life, the Arts, Agriculture and Medicine.

Edited by JAMES R. NICHOLS and W. J. ROLFE. 4to. Monthly. One vol. a year. 1867 to date.

Vols. IV., V., VI., VII., 1870 to 1873.

THE BRITISH Journal of Photography : The Organ for the following Six Societies: Liverpool, Manchester, (2,) Edinburgh, Glasgow and Sheffield.

4to. Weekly. Two vols. a year. London, 1854 to date.

Vol. XXII., January to June, 1875.

BULLETIN de la Société Industrielle de Mulhouse.

Vols. XLIII., XLIV., 1873, 1874. Vol. XLV., 1875, January to June.

BULLETIN du Musée de L'Industrie de Belgique.

Vols. I. to LXVI., 1841 to 1874 ; Vol. LXVII., 1875, January to June.

FÄRBER-ZEITUNG. Organ für Färberei, Druckerei, Bleicherei, Appretur, Farbwaaren und Buntpapierfabrikation, Droguenhandel, Spinnerei und Weberei.

Edited and Published by M. REIMAN. 4to. Weekly. Berlin.

1875, January 1, to June 26.

INDUSTRIE-BLÄTTER. Wochenschrift für Fortschritt und Aufklärung in Gewerbe, Hauswirtschaft, Gesundheitspflege.

Published by H. HAGER and T. JACOBSEN. 4to. Weekly. One vol. a year. Berlin, 1863 to date.

Vols. X., XI., 1873, 1874. Vol. XII., 1875, January 1, to June 26.

JAHRESBERICHT über die Leistungen der Chemischen Technologie mit besonderer Berücksichtigung der Gewerb-statistik.

Edited by JOHANNES RUDOLPH WAGNER, 1855 to 1869. RUDOLPH WAGNER, 1870 to date. 8vo. Leipsig, 1855 to date.

Vols. I. to XX., 1855 to 1874.

JOURNAL für Practische Chemie.

Founded by OTTO LINNE ERDMANN. Two vols. a year. Leipsic, 1830 to date.

First Series. Vols. I. to CVIII., 1834 to 1869.

Second Series. Vols. I. to XII., 1870 to 1875.

Index volumes, (authors and subjects.) 1, for Vols. I. to LX.

2, for Vols. XCI. to CVIII.

JOURNAL of Applied Chemistry.

4to. Monthly. One vol. a year. 1866 to May, 1875.

Vols. IV. to IX., 1869 to 1874. Vol. X., Jan., to May, 1875.

*Publication discontinued.***THE JOURNAL of Gas Lighting and Water Supply and Sanitary Improvement.**

4to. Semi-Monthly. One vol. a year. London, 1849 to date.

Vols. XVII. to XXV., 1868 to 1875.

LE MONITEUR Scientifique. Journal des Sciences Pures et Appliquées. Travaux publiés à l'Étranger. Compte-Rendu des Académies et Sociétés Savantes.

Edited by Dr. DUQUESNEVILLE. 4to. Monthly. One vol. a year. Paris, 1856 to date.

Second Series. Vol. VII., 1870.

Third Series. Vols. I. to IV., 1871 to 1874. Vol. V., 1875, January to June.

LES MONDES. Revue Hebdomadaire des Sciences et de leurs Applications aux Arts et à L'Industrie.

Edited by M. L'ABBE MOIGNO. 8vo. Monthly. Three vols. a year. Paris.

Vols. XXII. to XXXVI., 1860 to 1875.

LE TECHNOLOGISTE, ou Archives des Progrès de L'Industrie Française et Étrangère, ouvrage utile aux Manufactures, aux Fabricants, aux Chefs D'Atelier, &c., &c.

Published under the direction of M. F. MALPEYRE. 8vo. Monthly. One vol. a year. Paris.

Vols. XXX. to XXXIV., 1868 to 1874. Vol. XXXV., 1875, January to June.

PHOTOGRAPHISCHE Mittheilungen. Zeitschrift des Vereines zur Beförderung der Photographie.

8vo. Monthly. 1863.

Vols. IX. to XI., 1872 to 1874. Vol. XII., 1875, January to June.

POLYTECHNISCHES Central Blatt.

One vol. a year. Leipsig.

Quarto Series, 1835 to 1845.

Quarto Series, 1857 to 1874; 1875, January to June.

POLYTECHNISCHES Journal.

Edited by E. M. DINGLER. Three vols. a year. Augsburg, 1820 to date.

Vols. I. to CCXVI., 1820 to 1875.

Index Volumes, (subjects.) Vol. I. Embracing Vols. I. to LXXVIII., 1820 to 1840. Vol. 2. Embracing Vols. LXXIX. to CLVIII., 1842 to 1860. Vol. 3. Embracing Vols. CLIX. to CXCVIII., 1861 to 1870.

POLYTECHNISCHES Notizblatt für Gewerbtreibende, Fabrikanten und Künstler.

Edited by RUD. BÖTTGER. 8vo. Semi-Monthly. Mainz, 1845 to date.

Vols. XXVII., XXVIII., XXIX., 1872, 1873, 1874. Vol. XXX., 1875, January to June.

REPERTORIUM der Technischen, Mathematischen und Naturwissenschaftlichen Journal-Literatur.

Published by F. SCHOTTE. 8vo. Monthly. One vol. a year. Leipsig, 1869 to date.

1869, 1870, 1871. Index to vol. for 1870.

REPERTORIUM Commentationum a Societatibus Litterariis Editarum. Secundum Disciplinarum Ordinem digessit I. D. Reuss.

(A valuable collection of the Transactions of Philosophical Societies from the earliest times to the date of publication.)

16 vols. 4to. Gottingen, 1801-1821.

Vols. III., IV. *Chemia. Res Metallica et Physica.*

REVUE Hebdomadaire de Chimie Scientifique et Industrielle.

Published under the direction of M. CH. MENÉ. 8vo. Weekly. One vol. a year. 1869 to date.

Vols. III., IV., V., 1872, 1873, 1874. Vol. VI., 1875, January to June.

SCIENTIFIC American. A Weekly Journal of Practical Information, Arts, Science, Chemistry and Manufactures.

Folio. Weekly. Two vols. a year. 1815 to date.

First Series. Vols. II. to XIV., 1816 to 1858.

Second Series. Vols. I. to XVIII.; XXI. to XXXII., 1859 to 1875.

See, also, Periodical Publications, under General and Inorganic Chemistry, page 227.

METALLURGY.

GENERALITIES.

- AGRICOLÆ, Georgii. De ortu et causis subterraneorum ; De natura eorum quæ effluunt ex terra ; De natura fossilium ; De veteribus et novis metallis. Bermannus, sive De re metallica Dialogus. Interpretatio Germanica nova rei metallicæ, addito Indice foecundissimo.
4to. 827 pp., III. plates. Basileæ, 1546.
- De Re Metallica Libri XII. With an Appendix, Rei Metallicæ. Nomina Latina Græcæque Germanice Reddita et ex Ordine, quo quodq. primo occurrit collocata.
2to. 502 pp. Basileæ, 1561.
- ANLEITUNG zur Anfertigung der Vermögens—und Ertrags—Berechnungen bei der Bergwerks—Hütten—und Salinen Verwaltung.
8vo. 56 pp. Berlin, 1866.
- zur Ausstellung der Etats und Oekonomie pläne der Bergwerks—Huetten—und Salinen Verwaltung von 15 December, 1866.
8vo. 40 pp. Berlin, 1866.
- BAUERMAN, Henry. A Descriptive Catalogue of the Geological, Mining and Metallurgical Models in the Museum of Practical Geology.
12mo. 199 pp. London, 1865.
- BEOBACHTUNGEN. Versuche und Einführungen den K. K. Kunst-Bau-Berg-und Hüttenwesens-Beamten im Gebiete des Berg und Hüttenmännischen Maschinen und Bauwesens.
2 vols. text ; 3 vols. plates. 1851–1853.
- BERTHIER, P. Handbuch der metallurgischen analytischen Chemie.
2 vols. 8vo. Leipsig, 1835, 1836.
- BERICHTE über die Weltausstellung zu Paris im Jahre, 1867.
Band III. 1. Chemisch-Metallurgie. 2. Nahrungsmittel und Getränke.
8vo. Vienna, 1869.
- über die Zweite Allgemeine Versammlung von Berg-und Hüttenmännern zu Wien. (21 bis 28 September, 1861.)
8vo. 123 pp. Vienna, 1862.
- BIBLIOTHECA rerum metallicarum. Verzeichniss der bis mitte 1856 in Deutschland über Bergbau, Hütten-und Salinenkunde und verwandte zweige erscheinen Bücher, Karten und Ansichten.
16mo. 110 pp. Eisleben, 1857.
- BLOMSTRAND, C. W. Om Tantalmetallerna och deras nativa föreningar. Vol. IX., Pamphlets. Quarto series.
4to.
- BOLLEY, P. A. Handbuch der Chemischen Technologie.
Band VII. Die Metallurgie. Parts 1, 2, 3. 8vo. 608 pp. Braunschweig, 1868. Band VIII. Bearbeitung der Metalle. Part 2. 8vo. 81 pp., I. plate. Brunswick, 1874.

- BRITISH Patent Office. Abridgments of Specifications of Patents for
 ——— Metals and Alloys. 1623–1859. 480 pp. 1860.
 ——— Plating or Coating of Metals with Metals.
 Part I. 1657–1860. 198 pp. 1862.
 Part II. 1861–1865. 74 pp. 1867.
- BROCKMAN, C. H. Die Metallurgischen Krankheiten des Oberharzes.
 8vo. 375 pp. Osterode.
- BURAT, Amédée. Mineralogie Appliquée. Description des Mineraux Employés dans les Industries Metallurgiques et Manufacturiers.
 8vo. 476 pp. Paris, 1864.
- BYRNE, Oliver. The Practical Metal-Worker's Assistant.
 8vo. 652 pp. Philadelphia, 1864.
- CAMBESSY, Alph. Dictionnaire Minier et Metallurgique Allemand-Française.
 16mo. 203 pp. Paris, 1868.
- CHURCH, John A. Notes of a Metallurgical Journey in Europe.
 8vo. 100 pp. New-York, 1873.
- CRAMER, J. A. Anfangsgrunde der Metallurgie.
 12mo. Quedlinburg, 1874.
- CROOKES, William, and Rohrig, Ernst. A Practical Treatise on Metallurgy. Adapted from the last German edition of Professor Kerl's Metallurgy.
 3 vols. 8vo. London, 1868.
- DE CUYPER, Ch. Revue de L'Exposition de 1867. Mines, Metallurgie, Chimie, Mécanique, Navigation, Chemins de Fer, Constructions, Sciences et Arts Appliqués à L'Industrie. Tomes I. to IV. Text and plates.
 6 vols. 8vo.
- DUFRENOY, E. Elie de Beaumont, Coste, Leone, and Perdonnet, Auguste. Voyage Metallurgique en Angleterre. Second edition.
 2 vols. 8vo. text; Atlas, XXXVIII. plates. Paris, 1837.
- ERKLARENDES Wörterbuch der im Bergbau, in der Hüttenkunde und in Salinwerken vorkommenden-technicken Kunstausdrücke und Fremdwörter.
 8vo. 176 pp. Burgsteinfurt, 1869.
- FALLER, Gustav. Geschichten der K. Berg-und Forstakademie im Schemnitz.
 8vo. 106 pp. Schemnitz, 1868.
- Beschreibung einiger wichtigerer Metallbergbau in Oberungarn.
 8vo. 82 pp. Schemnitz, 1868.
- GAMBRESY, A. Dictionnaire Minier et Metallurgique.
 12mo. 203 pp. Paris, 1868.
- GEORGE, R. A. Description of his Method of Expelling Sulphur from Ores.
 8vo. 9 pp.
- GILLON, A. Cours de Metallurgie Générale.
 8vo. 262 pp.; Atlas, XII. plates. Liege, 1869.
- GRUTZNER, August. Die Angustinsche Silber-Extraction in ihrer anwendung auf Hüttenproducte und Erze.
 8vo. 174 pp., IV. plates. Brunswick, 1851.
- HARTMANN, Carl. Berg-und Huttenmännischer Atlas.
 4to. text; Atlas, XLII. plates. Weimar, 1860.
- Handbuch der Bergbau-und Hüttenkunde.
 4to. 1313 pp. text.; Atlas, XLV. plates. Weimar, 1858.

- HARTMANN, Carl. Handbuch der Metallgiesserei.
12mo. 367 pp. text; Atlas, XI. plates. Weimar, 1863.
- Handbuch der praktische Metallurgie.
2 vols. 12mo. text; Atlas, XVII. plates. Weimar, 1863.
- Vade mecum für den practischen Hüttenmann.
12mo. 342 pp. Hamm, 1863.
- The same as above.
12mo. 415 pp., V. plates. Hamm, 1863.
- HARVÉ, A. Alliages Métalliques. 12mo. 458 pp. Paris, 1839.
- HAUER, Julius Ritter von. Die Fördermaschinen der Bergwerke.
8vo. text, 438 pp.; Atlas, XXX. plates. Leipsig, 1871.
- Die Hüttenwesens-maschinen.
8vo. 286 pp., XXVIII. plates. Vienna, 1867.
- HAUSMANN, J. F. L. Neue Beiträge zur metallurgischen Krystallkunde.
4to. 14 pp. Gottingen, 1852.
- Norddeutsche Beiträge zur Berg-und Hüttenkunde.
8vo. 121 pp. Brunswick, 1806.
- HILDERBRANDT, F. Anfangsgründe der Metallurgie.
8vo. 595 pp. Erlangen, 1806.
- HOFFMANN, Johannes Georgius, and J. B. Böhmer. De Matricibus Metallorum Amphisium Philosophorum Ordinis.
8vo. 96 pp. Leipsig, 1738.
- HOLLUNDER, C. F. Tagebuch einer metallurgisch-technologischen Reise.
8vo. 487 pp. Nuremburg, 1824.
- HUYSEN, A. Einrichtung einer hüttenmannischer Lehranstalt in Oberschlesien.
8vo. 31 pp. Breslau, 1863.
- KARSTEN, E. J. B. Grundriss der Metallurgie und der metallurgischen Hüttenkunde.
8vo. 535 pp. Breslau, 1818.
- System der Metallurgie.
5 vols. 8vo., text; Atlas, LI. plates. Berlin, 1832.
- KATALOG für die Sammlung der Bergwerks-Hütten-, Salinen-, und Steinbruchs Producte von Elsass-Lothringen auf der Wiener Weltausstellung von 1873. 8vo. 98 pp. Strassburg, 1873.
- KERL, Bruno. Anleitung zum Studium der Harzer Hütten-Prozesse insbesondere sowie der Hütten-Prozesse überhaupt.
16mo. 84 pp. Clausthal, 1857.
- Die Oberharzer Hütten-Prozesse.
8vo. 196 pp., 54 pp. Clausthal, 1861.
- Grundriss der Allgemeinen Hüttenkunde.
8vo. 284 pp. Leipsig, 1872.
- Grundriss der Metallhüttenkunde.
8vo. 445 pp. Leipsig, 1873.
- Handbuch der Metallurgischen Hüttenkunde.
3 vols. 8vo. Freiberg, 1855.
- The same as above. 4 vols. 12mo. Freiberg, 1861-1865.
- KLIPSTEIN, Auguste von. Gemeinützige Blätter zur Beforderung des Bergbaues und Hüttenbetriebes.
4to. Heft I. 110 pp. Frankfort, 1849.
Heft II. 124 pp., I. plate. Giessen, 1859.

- KUPELWEISER, F. Officieller Ausstellungs-Bericht der Wiener Ausstellung, 1873.
 Part I. Bergbau und Hüttenwesen. 8vo. 19 pp.
 Part II: Das Hüttenwesen. 8vo. 110 pp.
 2 Pamphlets. 8vo. Vienna, 1873.
- KÜSTEL, Guido. A Treatise on the Concentration of all Kinds of Ores; Including the Chlorination Process.
 8vo. 259 pp., VII. plates. San Francisco, 1868.
- LAMPADIUS, W. A. Grundriss einer allgemeinen Hüttenkunde.
 8vo. 531 pp. Gottingen, 1827.
- Die neueren Fortschritte im Gebiete der Gesammten Hüttenkunde in Nachträgen zur Grundriss einer allgemeinen Hüttenkunde.
 8vo. 290 pp. Freiberg, 1839.
- Handbuch der allgemeinen Hüttenkunde.
 2 vols. 8vo. Gottingen, 1817.
- Neue Erfahrungen in Gebeite der Chemie und Hüttenkunde.
 8vo. 188 pp., IV. plates. Weimar, 1817.
- LE PLAY, F. Beschreibung der Hütten-Prozesse. Edited by Carl Hartmann.
 8vo. 260 pp. Quedlinburg, 1851.
- LINDAUER, G. Compendium der Hütten-Chemie.
 8vo. 488 pp. Prag, 1861.
- LORENZ, Wilhelm. Stammbaum zu dem Prozessen auf den Freiburger Hütten. A Chart.
 Freiberg.
- MAKINS, George H. A Manual of Metallurgy.
 8vo. 442 pp. Philadelphia, 1865.
- The same as above. Second edition. 8vo. 592 pp. 1873.
- MATZDORFF, J. Martius. Katechismus der Galvanoplastik.
 12mo. 104 pp. Leipsig, 1868.
- NAPIER, James. A Manual of Electro-Metallurgy.
 8vo. 356 pp. Philadelphia, 1853.
- ODERHEIMER, F. Das Berg-und Hüttenwesen im Herzogthum Nassau.
 8vo. Weisbaden, 1865.
- OVERMAN, Frederick. A Treatise on Metallurgy, comprising Mining, and General and Particular Metallurgical operations.
 Sixth edition. 8vo. 723 pp. New-York, 1865.
- PEPPER, John H. The Playbook of Metals.
 8vo. 504 pp. London, 1862.
- PERCY, John. Die Metallurgie.
 Vol. I. Die Lehre von den metallurgischen Processen im Allgemeinen und der Schlacken, &c. Translated and Edited by Dr. F. Knapp.
 594 pp. 1862.
- Traité Complet de Metallurgie. Translated under the auspices of the Author, with an Introduction and Appendix by Messrs. Petitgaud and A. Ronna.
 5 vols. 8vo. Paris, 1864–1867.
- Vol. I. Introduction. Notions, Generales, &c.
- Metallurgy. The Art of Extracting Metals from their Ores, and Adapting them to Various Purposes of Manufacture.
 3 vols. 8vo. London, 1861–1870.
- Vol. I. Introduction, Fuel, Fireclays, Copper, Zinc, Brass, &c.
 634 pp. 1861.

- PHILLIPS, J. Arthur. *A Manual of Metallurgy.*
8vo. 619 pp. London, 1859.
- PLATTNER, Carl Freiderich. *Vorlesungen über Allgemeine Hüttenkunde.*
2 vols. in one. 8vo. Freiberg, 1860–1863.
- RACKEBRANDT, A. *Der Metallarbeiter.*
16mo. 52 pp. Leipsig, 1838.
- RAMMELSBERG, Karl Freiderich. *Lehrbuch der Chemischen Metallurgie.*
8vo. 480 pp. Berlin, 1865.
- RICHARDSON, W. *The Chemical Principles of the Metallic Arts.*
8vo. 303 pp. Birmingham, 1790.
- RITTENGER, G. von. *Kurze Mittheilungen über Berg-und-Hüttenwesens-Maschinen und Baugegenstände auf der Allgemeinen Industrie Ausstellung zu Paris, 1867.*
8vo. 71 pp. Vienna, 1867.
- P. Ritter von. *Erfahrungen im berg-und hüttenmannischen maschinen, — bau-und aufbereitungswesen.* Gratisbeilage Zum Oesterreichische Zeitschrift für Berg und Hüttenwesen auf 1872. 4to. 31 pp., XVI. plates. Vienna, 1872.
- *Taschenbuch der Aufbereitungskunde.*
12mo. 95 pp. Berlin, 1867.
- RIVOT, E. L. *Handbuch der theoretisch-practischen Hüttenkunde.* Translated by Carl Hartmann. Vol. 1. *Die Kupperhüttenkunde.*
12mo. 459 pp. Leipsig, 1860.
- *Principes généraux du traitement des Minerais Métalliques.*
2 vols. 8vo. Paris, 1869.
- RONALDS, Edmund; Richardson, Thomas, and Watts, Henry. *Chemical Technology; or, Chemistry in its Applications to the Arts and Manufactures; with which is incorporated a revision of Dr. F. Knapp's "Technology."* Second edition. Vol. I. Part 2. *Fuel, Destructive Distillation and Artificial Illumination.*
836 pp. 1855.
- SCHEERER, Theodor. *Lehrbuch der Metallurgie.* Vol. I. and part of Vol. II. bound in one vol. 594, 194 pp. Brunswick, 1857.
- SCOFFERN, J., Oxland, Robert, and others. *The Useful Metals and their Alloys.*
8vo. 654 pp. London, 1857.
- SILVERSMITH, J. *A Practical Hand-Book for Miners, Metallurgists and Assayers.*
8vo. 271 pp. New-York, 1866.
- SNELUS, G. J., Lester, John, and Messrs. Taskin et Tahon. *Rapports sur le Puddlage Mécanique par le Procédé Danks.*
8vo. 147 pp., I. plate. Brussels, 1873.
- SPARRE, Julius von. *Zur Theorie der Separation oder Kritische Bemerkungen zu Von Rittenger's Lehrbuch der Aufbereitungskunde.*
8vo. 48 pp. Oberhausen, 1869.
- STÖLZEL, E. *Die Metallurgie im Bolley's Chemischen Technologie.*
3 parts. 8vo. Brunswick, 1868.
- TASHE, Hans. *Kurzer Ueberblick über das Berg-Hütten-und Salinen-Wesen im Grossherzogthum Hessen.*
8vo. 92 pp. Darmstadt, 1858.

- TENNER, J. Handbuch der Metale Legirungen.
12mo. 134 pp. Quedlinburg, 1860.
- TILMAN, E. Der Bergbau und das Amalgations Verfahren in dem Bergwerks-Districte von Guanajuato in Mexico.
4to. 73 pp. Munster, 1866.
- VIVENOT, Franz v. Bergbau und Hüttenwesen. (Gruppe I. Section I.) Montanproducte mit Ausnahme der Fossilen Brennstoffe. *Officieler Berichte, Wiener Weltausstellung.* vol. XXI., Pamphlets. Octavo series. 8vo. 9 pp. Vienna, 1873.
- WARZEE, Andree. Exposé Historique et Statistique de L'Industrie Métallurgique dans Le Hainaut.
8vo. 148 pp. Mons, 1861.
- WEHRLE, A. Lehrbuch der Probir und Hüttenkunde.
2 vols. 8vo. text; Atlas, XXVII. plates. Vienna, 1841.
- WIGAND, A. Frischhüttenbetrieb. 8vo. 144 pp. Berlin, 1837.
- WURTZ Amalgamation Co. of New-York. Statement of the, with a letter from Henry Wurtz to Prof. B. Silliman, on Sodium Amalgamation. Vol. VII., Pamphlets. Octavo series.
- ZIPPE, F. X. M. Geschichte der Metalle.
8vo. 364 pp. Vienna, 1857.
See, also, International Expositions.

PERIODICAL PUBLICATIONS.

- AMERICAN Journal of Mining, Milling, Oil-Boring, Geology, Mineralogy, Metallurgy, &c.
4to. Weekly. Two vols. a year. New-York.
Vols. I.; IV. to VII., 1866 to 1869.
- AMERICAN Mining Index. Devoted to the Mineral and Metallic Resources of the United States.
Folio. Weekly. Two vols. a year. New-York.
Vols. I. to V., 1865 to 1867.
- ANNALES des Mines.
Founded under the title:
JOURNAL DES MINES, ou Recueil des Mémoires sur L'Exploitation des Mines et sur les Sciences et les Arts qui s'y rapportent.
Published under the direction of the Minister of Public Works. 8vo. Paris.
Two vols. a year. 1794-1815.
Vols. I. to XXXVIII., 1794 to 1815. Continued under the title:
ANNALES des Mines, ou Recueil des Mémoires sur L'Exploitation des Mines. Redigées par les Ingenieurs des Mines et publiées sous l'autourisation du ministre des travaux publics.
8vo. Two vols. a year. Paris, 1816 to date.

ANNALES des Mines:

First Series. Vol. II., 1817.

Second Series. Vols. I. to VIII., 1827 to 1832. General Index.

Third Series. Vols. I. to XX., 1833 to 1841. General Index.

Fourth Series. Vols. I. to XX., 1842 to 1851. General Index.

Fifth Series. Mémoires. Vols. I. to XX., 1852 to 1861. General Index.

Administration. Vols. I. to X., 1852 to 1861.

Sixth Series. Mémoires. Vols. I. to XX., 1862 to 1871.

Administration. Vols. I. to X., 1862 to 1871.

Seventh Series. Mémoires. Vols. I. to VII., 1872 to 1875.

ANNALES du Genie Civil, et Recueil de Mémoires sur les Ponts et Chaussées les Routes et Chemins de Fer, les Constructions et la Navigation Maritime et Fluviale, l'Architecture, les Mines, la Metallurgie, la Chimie, la Physique, les Arts Mecaniques, l'Économie Industrielle, le Genie Rural. Publiées par E. Lacroix et des autres.

Svo. Monthly. One vol., text and plates, a year. Paris, 1862 to date.

First Series. Vols. I. to VII., (text and plates,) 1862 to 1868.

Second Series. Vols. XVI., (text and plates,) 1867; XVII., 1870 to 1871.

ANNUAL Report of the Secretary of the American Iron and Steel Association, for the year 1874. Svo. Philadelphia.

ARCHIV für Bergbau und Hüttenwesen.

Edited by C. J. B. KARSTEN. Svo. Breslau and Berlin, 1820 to 1831.

Vols. I. to XX., 1820 to 1831.

BERG und Hüttenmännisches Zeitung.

4to. Weekly. One vol. a year. Nordhausen and Leipsig. 1842 to date.

Vols. I. to XXXIV., 1842 to 1874. (Lacking Vols. XVIII. and XXIII.) Vol. XXXV., 1875. No. 1, January 1, to No. 27, July 2.

BULLETIN de la Société de L'Industrie Minerale.

First Series. Vols. I. to IV.; VIII. to XV., 1855 to 1870.

Second Series. Vols. I. to IV., 1870 to 1874.

BULLETIN de la Société Industrielle de Mulhouse.

Vols. XLIII, XLIV., 1873, 1874. Vol. XLV., 1875, January to June.

BULLETIN of the American Iron and Steel Association.

Weekly. Philadelphia, 1866 to date.

Vol. I. to VIII., 1866 to 1874; Vol. IX., 1875, January to June. 9 vols. 4to. Philadelphia.

DER BERG-GEIST Zeitung für Berg-Hüttenwesen und Industrie.

Folio. Semi-Weekly. One vol. a year. Cologne, 1857 to date.

Vols. XVIII., XIX., 1873, 1874; Vol. XX., 1875, No. 1. January 1, to No. 53, July 2.

DER Bergwerks-Betrieb in den Reichsrathe Vertretenen Königreichen und Ländern der Oesterreichisch-Ungarischen Monarchie, 1870. 8vo. 299 pp. Vienna, 1871.

DER BERGWERKSFREUND.

8vo. One vol. a year. Eisleben.

Vols. I. to XIX., 1839 to 1856.

DIE BAULINCHEN Anlagen auf der Berg-Hütten-und Salinenwesen in Preussen.

Edited by — SCHOENFELDER. 4to. One vol. a year. Berlin.

Vols. I., II., III., 1861, 1862, 1863.

THE ENGINEERING and Mining Journal.

Edited by ROSSITER W. RAYMOND and RICHARD P. ROTHWELL. 4to. Two vols. a year. New-York, 1869 to date.

Vols. VIII. to XIX., January, 1869, to June, 1875.

ERFAHRUNGEN im berg-und hüttenmannischen Maschinen, Bau-und Aufbereitungswesen.

Edited by P. RITTENGER. 4to. One vol., text and plates, a year. Vienna.

1854, text and plates.

1855, plates.

1856 to 1866, text and plates.

1867, plates.

1868 to 1870, text and plates.

1872, text and plates.

1873, plates.

IRON. The Journal of Science, Metals and Manufactures. With which is incorporated the Mechanics' Magazine, established 1823.

Folio. Weekly. Two vols. a year. London, 1873 to date.

Vols. I. to IV., 1873, 1874. Vol. V., 1875, January 2, to June 26.

THE IRON Age. A Review of the Hardware and Metal Trades.

Edited by JAMES C. BAYLES. Folio. Weekly. Two vols. a year. New-York, 1863 to date.

Vols. IV. to IX.; XI. to XIV., 1867 to 1874. Vol. XV., 1875, January 2, to June 26.

JAHRBUCH der K. K. Bergakademien Leoben und Schemnitz und der K. K. Montan-Lehranstalt Pibram.

Vol. XV., 1865. Edited by P. Ritter von Tunner.

8vo. Vienna, 1865.

JAHRBERICHT über die Beobachtungen, Versuche, und neuen Einführungen der K. K. Montan-Beamten auf dem Gebiete des Berg-und Huttenmännischen-Maschinen-und bauwesens.

1851, text; 1852, text and plates.

JAHRBERICHT über die Leistungen der Chemischen Technologie mit besonderer Berücksichtigung der Gewerb statistik.

Edited by JOHANNES RUDOLPH WAGNER, 1855 to 1869. RUDOLPH WAGNER, 1870 to date. 8vo. Leipsig, 1855 to date.

Vols. I. to XX., 1855 to 1874.

JOURNAL of the Iron and Steel Institute, London.

1871, Vols. 1, 2; 1872, Vols. 1, 2; 1873, Vol. 1, No. 2; 1874, Vol. 1, No. 2.

KALENDER für den Oberschlesischen Bergmann.

Edited by R. C. VON CARNALL. 8vo. Tarnowitz, 1845.

Vols. I., II., 1845.

KALENDER für den Sächsischen Berg-und Hüttenmann.

8vo. Annually. Freiberg.

1827 to 1851. Index for the years 1827 to 1840. Continued under the title:

JAHRBUCH FÜR DEN BERG-UND HÜTTEN-MANN. 1852 to 1869.

Continued under the title:

JAHRBUCH FÜR DEN BERG-UND HÜTTENWESEN IM KÖNIGREICHE SACHSEN.

1870 to 1875.

THE MINING and Scientific Press. An Illustrated Journal of Science and Industrial Progress, Mining, Mechanic Arts and Inventions.

Published by DEWEY & Co. Folio. Weekly. Two vols. a year. San Francisco, 1860 to date.

Vols. XI., XII., XIII.; XVI. to XIX.; XXI., XXIII., XXV., XXVI., XXVII., XXIX., 1865 to 1874. Vol. XXX.,

1875, January 1, to June 26.

THE MINING and Smelting Magazine.

8vo. Monthly. London, 1862 to 1865.

Vols. I. to VI., 1862 to 1864. Vol. VII., 1865, January, February and March Nos.

THE MINING Magazine: devoted to Mines, Mining Operations, Metallurgy, &c., &c.

Edited and conducted by WILLIAM J. TENNY, 1853 to 1857; THOMAS McELRATH, 1858. 8vo. Monthly. New-York, 1853 to 1858.

Vols. I. to X., 1853 to 1858. *Publication discontinued.*

NOTIZEN zur Sammlung von Zeichnungen für die Hütte.

Quarto. Published annually. Berlin.

1857; 1860 to 1868.

OBERSCHLESISCHEN Taschenbuch und Kalender.

1844, 1845. 2 vols. 12mo. Tarnowitz.

OESTERREICHISCHES Montan-Handbuch.

Published by the Minister of Agriculture.

8vo. 258 pp. Vienna, 1875.

OESTERREICHISCHES Zeitschrift für Berg und Huettenwesen.

Edited by OTTO FREIHERR VON HINGENAU. 4to. Weekly. One vol. a year. Vienna, 1853 to date.

Jahrgang I. to XXII., 1853 to 1874; XXIII., 1875, January 2, to June 26.

THE QUARTERLY Journal of Science.

Edited by WILLIAM CROOKES. 8vo. Quarterly. One vol. a year. London, 1864 to date.

Vols. IV., VI. to XI., 1867 to 1874. Vol. XII., 1875, parts 1 and 2.

THE RAILWAY World. In which is incorporated the United States Rail-Road and Mining Register.

4to. Weekly. Philadelphia, 1875.

Vol. I., 1875, No. 21.

REPERTORIUM Commentationum a Societatibus Litterariis Editarum. Secundum Displinarum Ordinem digessit I. D. Reuss.

16 vols. 4to. Göttingen, 1801–1821.

Vol. III., IV. Chemia; Res Metallica et Physica.

REVUE Universelle des Mines, de la Metallurgie, des Travaux Publiques, des Sciences et des Arts Appliqués l'Industrie.

Under the direction of M. CH. DE CUYPER. 8vo. Two vols. a year. Paris, 1857 to date.

Vols. I. to XXXVII., 1857 to 1875.

SÄCHSISCHE Bergwerks-Zeitung.

Edited by TH. BUSCHICK. 8vo. Freiberg.

1852, 1853, 1854.

TRANSACTIONS of the American Institute of Mining Engineers.

Vol. I., May, 1871, to February, 1873; Vol. II., 1873, to February, 1874. 2 vols. 8vo. Philadelphia.

UNITED STATES Rail-Road and Mining Register.

Weekly. One vol. a year. Philadelphia, 1856 to 1874.

Vols. XVI. to XIX., 1871 to 1874. In January, 1875, this Journal was incorporated in the Railway World, *which see*.

ZEITSCHRIFT für das Berg-Hütten u. Salinen-Wesen in dem Preussischen Staate, herausgegeben in dem Ministerium für Handel, Gewerbe und Öffentliche Arbeiten.

4to. One vol. per year, published in six parts. Berlin, 1854 to date.

Vols. I. to XXII., 1854 to 1874. Vol. XXIII., 1875, January to June.

See, also, Periodical Publications, *under* General and Inorganic Chemistry, p. 227.

FUELS AND FURNACES.

AUBEL, C. Das Raschetttsche System der Patent,—Normal und Universal—Schachtofen. 8vo. 62 pp. Leipsig, 1863.

BARLET, C. H. Tenue des Lignes appliquée à la compatabilité des Mines de Houille, des Hauts Fourneaux et des Usines à Fer. 8vo. 217 pp. Paris, 1861.

BELL, J. Lowthian. Ueber die Entwicklung und Verwendung der Wärme. Frei übersetzt mit einiger Beimerkungen begleitet von P. Tunner. 8vo. 111 pp. Leipsig, 1870.

BERG, C. F. v. Anleitung zum Verkohlen des Holzes.

12mo. 278 pp. Darmstadt, 1860.

BISCHOF, H. Die indirecte, aber höchste Nützung der rohen Brennmaterialien. 8vo. 68 pp. Quedlinburg, 1856.

BRITISH Patent Office. Specifications of Patents relating to—
 ——— Air Furnaces. Robert Gardner, Patentee.

———— Blast Furnaces, &c. Archibald State, Patentee.
 3 pp., I. plate. 1856.

———— Blast Furnaces. James Yates, Patentee.
 4 pp., II. plates. 1859.

———— Collecting the Inflammable Gases Generated in Blast Fur-
 naces. C. E. Darby, Patentee. 10 pp., III. plates. 1855.
 3 pp., I. plate. 1857.

———— Furnaces for Smelting Iron. C. C. Alger, Patentee.
 8 pp., IV. plates. 1858.

———— Furnaces. Daniel Dalton, Patentee. 3 pp., I. plate. 1855.

———— Furnaces or Fire Places. J. A. Detmold, Patentee.
 9 pp., I. plate. 1854.

———— Furnaces for the Manufacture of Cast Steel. J. H. Johnson,
 Patentee. 10 pp., II. plates. 1854.

———— Furnaces. A. L. Gibon and A. Frölich, Patentees.
 7 pp., II. plates. 1856.

———— Furnaces for Smelting Iron Stones and Ores. J. Strong,
 Patentee. 5 pp., I. plate. 1854.

———— Hot Blast Stove. F. Levick, Jr., and John James, Patentees.
 5 pp., II. plates. 1857.

———— Furnaces Used in the Manufacture of Iron. J. Jones, Pat-
 entee. 5 pp., VI. plates. 1857.

———— Preparation and Combustion of Fuel.
 Vol. I., 1620–1856. 1857. Vol. 2, 1857–1865. 1857.

———— Puddling Furnaces. Daniel Horton and George Horton,
 Patentees. 6 pp., III. plates. 1806.

BRIX, P. W. Untersuchungen über die Heiskraft der wichtiger
 Brennstoffe. 4to. 381 pp. Berlin, 1853.

BROMEIS, Theodor. Die Neuesten Methoden der Aufbereitung und
 Verdichtung des Torfs. 8vo. 53 pp. Berlin, 1859.

COTTA, Bernhard von. Erzgangbildung in der Sohle eines Flam-
 mofens. 8vo. 18 pp. Freiberg, 1851.

DIMOND, E. W. The Chemistry of Combustion, Applied to the
 Economy of Fuel, with Special Reference to the Construc-
 tion of Fire Chambers for Steam Boilers.

8vo. 162 pp. Worcester, 1867.

GROTHE, Hermann. Die Brennmaterialien und die Feueranlagen
 für Fabrik, Gewerbe und Haus.

8vo. 412 pp., LXXI. plates. Weimar, 1870.

GURLT, A. Die deutsche Steinkohle.

12mo. 51 pp. Bremen, 1868.

———— Q. Die Roheisenerzeugung mit Gas oder die Verhüttung der
 Eisenerze mit indirecter Benutzung des Brennmaterialies.

8vo. 30 pp., I. plate. Freiberg, 1857.

HAUER, Julius Ritter von. Untersuchungen über den Brennwerth
 der Braun-und Steinkohlen. 8vo. 272 pp. Vienna, 1862.

HERDER, v. Erläuterung der verzüglichsten apparate zur Erwär-
 mung der Gebläseluft.

8vo. 118 pp. Atlas folio, XXXV. plates. Freiberg, 1840.

- How You Waste Your Fuel and How to Prevent It. A Few Facts on Combustion. 8vo. 12 pp. Worcester, 1866.
- JOHNSON, W. R. Notes of the Use of Anthracite in the Manufacture of Iron. 12mo. 155 pp. Boston, 1841.
- LEAVITT, T. H. Facts about Peat, as an Article of Fuel. 8vo. 168 pp. Boston, 1866.
- LESLEY, J. P. The Iron Manufacturer's Guide to the Furnaces, Forges and Rolling Mills of the United States. 8vo. 772 pp. New-York, 1859.
- LEUCHS, Erhard F. Das Gebläze mit heitzer Luft. 12mo. 100 pp. Nuremburg, 1834.
- MATTHAEY, C. Der Ofenbaumeister. 12mo. 234 pp. Weimar, 1847.
- MERBACH, F. M. Die Anwendung der erwärmten gebläseluft. 8vo. 365 pp. Leipsig, 1840.
- MULLER, J. W., and Leucanchez, A. Nouvelle Méthode de Traitement au Hautes Fourneaux à Cuivre. 8vo. 28 pp. Liege, 1861.
- PATERA, Adolph. Ueber Flammeschutzmittel. Vol. VII., Pamphlets. Octavo series. 8vo. 34 pp. Vienna, 1871.
- PERCY, John. Die Metallurgie. Vol. I. Translated and Edited by Dr. F. Knapp. 8vo. 504 pp. Leipsig, 1862.
- Metallurgy. The Art of Extracting Metals from their Ores, and Adapting them to Various Purposes of Manufacture. Vol. I. Fuel, Fireclays, Copper, Zinc, Brass, &c. 634 pp. 1861.
- Traité Complet de Metallurgie. Translated under the auspices of the Author, with an Introduction and Appendix by Messrs. Pettigaud and Ronna. Tome I. 8vo. Paris, 1864.
- PERUTZ, H. Wärme-und Brennmaterialien, ihre Anwendung für industrielle Zwecke. 8vo. 202 pp. Berlin, 1864.
- RACHETTE, Waldemar. Description of his Patent Universal Blast and Smelting Furnace. 8vo. 9 pp. New-York, 1864.
- RONALDS, Edmund; Richardson, Thomas; and Watts, Henry. Chemical Technology; or, Chemistry in its Applications to the Arts and Manufactures; with which is incorporated a revision of Dr. F. Knapp's "Technology." Second edition. Vol. I. Part 2. Fuel, Destructive Distillation and Artificial Illumination. 836 pp. 1855.
- ROOT, P. H. and F. M. Illustrated Catalogue of Force Blast Blowers, Portable Forges, Cupolas and Gas Exhausters. 4to. 32 pp. Connorsville, Ind., 1874.
- SCHINZ, C. Die Wärme Messkunst. 2 vols. 8vo. text; 4to. plates. Stuttgart, 1859.
- Dokumente Betreffend den Hochofen. 8vo. 131 pp. Berlin, 1868.
- Documents concernant le Haute-Fourneau. Traduits par E. Fievet. 8vo. 128 pp. Paris, 1868.
- SCHLICKEYSEN, S. Mittheilungen über die Fabrication von Press-Torf. 8vo. 20 pp. Berlin, 1864.
- SIEMENS, C. W. A Lecture on Fuel. 8vo. 31 pp. London, 1873.

- SIEMENS, C. W. Description of his Patent Continuous Glass Melting Furnace. Vol. VII., Pamphlets. Octavo series.
8vo. 4 pp., I. plate. London, 1873.
- Description of his Patent Regenerative Gas Furnaces. Vol. VII., Pamphlets. Octavo series.
8vo. 19 pp., IV. plates. London, 1868.
- Plates Illustrative of the Combustion of the Gaseous Portion of Coal, and of the Modes by Which It May Be Effected in Furnaces. Vol. II., Pamphlets. Quarto series.
4to. XIV. diagrams. Liverpool, 1841.
- STAHLSCHMIDT, J. H. Darstellung des Eisen-hochofen prozesses in zahl und bild. 8vo. 85 pp. Ferndorf, 1855.
- STEINMAN, Ferdinand. Ergänzungs heft zu dem Compendium der Gasfeuerung. 8vo. 100 pp. Freiberg, 1868.
- The same as above. 8vo. 24 pp. Freiberg, 1869.
- TROSKA, Richard. Die Hochofen-Dimensionen auf Grundlage des Hochofen-Prozesses. 8vo. 46 pp. Weimar, 1868.
- VATTHAIRE, A. de. Études sur les hautes Fourneaux. 8vo. 236 pp. Paris, 1867.
- VOGEL, August. Der Torf, seine Natur und Bedeutung. 12mo. 170 pp. Brunswick, 1859.
- WACHLER, L. Betrachtungen über die jetzige Lage des Hochofenbetriebes in Oberschlesien. 8vo. 52 pp. Oppeln, 1857.
- WIENER Weltausstellung, 1873.
Notice sur les Objets Exposés par la Société des Charbonnages de Mariemont; L'Olive Chaud Bisson & Carnieres et par la Société de Charbonnage de Bascoup. 8vo. Mons, 1873.
- WILLIAMS, C. W. Plates Illustrative of the Combustion of the Gaseous Portion of Coal, and of the Modes by Which it May Be Effected in Furnaces. Vol. II., Pamphlets. Quarto series.
4to. XIV. diagrams. Liverpool, 1841.
- WINKLER, Kurt Alexander. Erfahrungsgesätze über die Bildung der Schlacken. 16mo. 56 pp. Freiberg, 1827.
- ZERRENER, C. Der Metallurgischen Gasfeuerung im Oesterreich. 8vo. 278 pp. Vienna, 1856.

See, also, International Expositions.

PERIODICAL PUBLICATIONS.

See under Metallurgy—Generalities, p. 262.

IRON.

- AKERMAN, Richard. Ueber den Standpunkt der Eisenfabrikation in Schweden zu anfang des Jahres, 1873. 8vo. 1873.
- ALEXANDER, J. H. Report on the Manufacture of Iron, addressed to the Governor of Maryland. 8vo. 269 pp. Annapolis, 1840.

AMERICAN Bureau of Mines Publications :

- *Memoirs*: 2. Guide for the Puddling of Iron and Steel, by Ed. Urbin. Trans. by T. Eggleston, Jr. Vol. II L., Pamphlets. Quarto series. 4to. 30 pp. New-York, 1866.
- ANSIAUX, L., and Maisson, L. *Traité pratique de la fabrication du fer et de l'acier puddlé.* 8vo. 282 pp., XXVIII. plates. Paris, 1865.
- BALLING, C. A. M. *Die Eisenindustrie Böhmens.* 8vo. 108 pp. Vienna, 1868.
- *Die Probirkunde des Eisens und der Brennmaterialien.* 8vo. 64 pp. Prag, 1868.
- *Zwei Abhandlungen über einige der wichtigsten Theile des Eisen-Hüttenwesens.* 4to. 40 pp. Prag, 1829.
- BARLET, C. H. *Tenue des Lines appliquée à la compatabilité des Mines de Houille, des Hauts Fourneaux et des Usines à Fer.* 8vo. 217 pp. Paris, 1861.
- BAUERMAN, Henry. *A Treatise on the Metallurgy of Iron.* 12mo. 399 pp. London, 1868.
- BAUER, H. *Kurze Anleitung zur Eisenhüttenkunde.* 24mo. 186 pp. Sonderhausen, 1819.
- BEAR, W. *Das Eisen—Seine Geschichte, Gewinnung und Bearbeitung.* 12mo. 360 pp. Leipsig.
- BELL, I. Lowthian. *Chemical Phenomena of Iron Smelting.* 8vo. 435 pp. London, 1872.
- BEUST, F. C. F. *Die Eisenerzlagerrstätten des obern Erzgebirges, &c.* 8vo. 36 pp. Freiberg, 1856.
- BLUMHOF, J. G. L. *Encyclopädie des Eisenhüttenkunde.* 4 vols. 12mo. Giessen, 1816–1821.
- BOMAN, L. E. *Das Bessemern in Schweden.* 8vo. 47 pp. Leipsig, 1864.
- BRITISH Patent Office. *Abridgments of Specifications of Patents for*
- *Iron and Steel.* 1621–1857, 271 pp. 1857–1865, 239 pp. 2 vols. 1857–1858.
- BRITISH Patent Office. *Specifications of Patents for*
- *Making Wrought Iron Directly from the Ore, and Collecting and Condensing Oxides or other substances while Deoxidising Iron or other Ores.* A. E. L. Belford, Patentee. 32 pp., IV. plates. 1854.
- *Manufacture of Iron.* S. M. Banks, Patentee. 3 pp., I. plate. 1857.
- *Manufacture of Iron.* T. Bottfield, Patentee. 4 pp. 1858.
- *Manufacture of Iron.* A. M. Crane, Patentee. 6 pp., II. plates. 1857.
- *Manufacture of Iron and other Metals.* H. Houldsworth, Patentee. 7 pp., II. plates. 1857.
- *Manufacture of Iron and Steel.* Robert McCall, Patentee. 5 pp., I. plate. 1855.
- *Manufacture of Iron.* L. N. De Meekenheiny, Patentee. 12 pp., I. plate. 1856.

- DUDLEY, Dud. Metallum Martis; or, Iron made with Pit-Coale, Sea-Coale, &c. 8vo. 119 pp. London, 1665.
- DÜRRE, E. F. Handbuch des gesammten Eisengiesserei betriebes. Band I. 8vo. 760 pp. Leipsig, 1870.
- Über die Constitution des Roheisens. 8vo. 186 pp. Leipsig, 1868.
- EDE, George. The Management of Steel, including Forging, Hardening, Tempering, Annealing, Shrinking and Expansion; also the Case Hardening of Iron. 12mo. 41 pp. New-York, 1864.
- EGLESTON, T. Tables to Illustrate the Metallurgical Lectures delivered at the School of Mines, Columbia College, New-York. Iron. 8vo. 92 pp., II. plates. New-York, 1869.
- EVERSMAN, F. A. A. Übersichte der Eisen-und Stahl-Erzzeugung, in so fern auf Wasserwerken vorgeht in den Ländern zwischen Lahn und Lippe. Vol. II., Pamphlets. Quarto series. 4to. 104 pp. Dortmund, 1804.
- FAIRBAIRN, William. Iron, its History, Properties, and Processes of Manufacture. 8vo. 293 pp. Edinburgh, 1865.
- On the Application of Cast and Wrought Iron to Building Purposes. Third edition. 8vo. 314 pp. London, 1864.
- FLACHAT, E., Petiet, J., and Barrault, A. Traité de la Fabrication de la Fonte et du Fer. 3 vols. 4to. Paris, 1842–1844.
- FRANÇOIS, J. Recherches sur le Gisement et la Traitement Direct des Minerais de Fer. 4to. 404 pp. Paris, 1843.
- FRENCH, B. F. History of the Rise and Progress of the Iron Trade in the United States. 8vo. 179 pp. New-York, 1859.
- GILL, Theodore. Handbuch für Eisen-und Stahlarbeiter. 12mo. 88 pp. Quedlinburg, 1834.
- GLOCKER, E. F. Ueber den Sulphatischen Eisensinter. Vol. II., Pamphlets. Quarto series. 4to. 28 pp., III. plates. 1856.
- GRUNER, L., and Lan. État present de la Metallurgie du Fer en Angleterre. 8vo. 850 pp., IX. plates. Paris, 1862.
- GURLT, A. De la Fabrication de la Fonte et du Fer au Moyen des Gaz. Vol. VIII., Pamphlets. Octavo series. 8vo. 31 pp., I. plate. Liege, 1857.
- Q. Die Roheisenerzeugung mit Gas oder die Verhüttung der Eisenerze mit indirecter Benutzung des Brennmaterials. 8vo. 30 pp., I. plate. Freiberg, 1857.
- HARTMANN, Carl. Der practische Puddel-und Walzmeister. 12mo. 427 pp. Weimar, 1861.
- Der heutige Standpunkt des deutschen Eisenhüttengewerbes. 8vo. 263 pp. Leipsig, 1861.
- Grundriss der Eisenhüttenkunde. 8vo. 603 pp. Berlin, 1852.
- Handbuch der Eisengiesserei. 12mo. 603 pp. text; Atlas, XXVII. plates. Weimar, 1863.

- HARTMANN, Carl. Handbuch der Eisenhüttengewerbskunde.
8vo. 614 pp., XVII. plates. Leipzig, 1860.
- Practische Eisenhüttenkunde.
3 vols. 4to. Weimar, 1852.
- Practisches Handbuch der Rohr- und Stabeisen-Fabrikation
in leichtfasslichen Vorträge.
8vo. 464 pp., I. plate. Leipzig, 1857.
- Vollständiges Handbuch der Eisengiesserei.
8vo. 298 pp., XI. plates. Ergänzungsheft.
72 pp., II. plates. Freiberg, 1847.
- Ueber die Eisen, Kupfer, Zink und Bleihütten-Betrieb. Drit-
tes heft. 8vo. 188 pp., IV. plates. Leipzig, 1850.
- HASSENFRATZ, J. H. La Siderotechnie, ou L'Art de Traiter Les
Minerais de Fer pour en obtenir de la Fonte, du Fer, et de
L'Acier. 4 vols. 4to. Paris, 1812.
- HAUER, Julius R. von. Die wichtigen Eisenerz-vorkommen in der
Oesterreichischen Monarchie und ihr Metallgehalt.
8vo. 187 pp. Vienna, 1863.
- HEWITT, Abram S. The Production of Iron and Steel in its Econo-
mic and Social Relations.
8vo. 104 pp. Washington, 1868.
- JOHNSON, W. R. Notes on the Use of Anthracite in the Manufac-
ture of Iron. 12mo. 155 pp. Boston, 1841.
- KARSTEN, E. J. B. Grundriss der Metallurgie und der metallur-
gischen Hüttenkunde. 8vo. 535 pp. Breslau, 1818.
- Handbuch der Eisenhüttenkunde.
5 vols. 8vo., text; Atlas, 2to. Berlin, 1841.
- KERPELY, Anton. Das Eisen auf der Wiener Weltausstellung,
1873. 8vo. 229 pp., IV. plates. Schemnitz, 1873.
- Die Anlage und Einrichtung der Eisenhütten. *First num-
ber.* 8vo. Leipzig, 1873.
- KOHN, Ferdinand. Iron and Steel Manufacture.
4to. 270 pp., LXII. plates. London, 1869.
- LANDRIN, H. C., Jr. Traité de la Fonte et du Fer.
8vo. 304 pp. Paris, 1864.
- LEDEBUR, A. Das Roheisen in bezug auf seine Verwendung zur
Eisengiesserei. Vol. VIII., Pamphlets. Octavo series.
8vo. 81 pp., II. plates. Leipzig, 1872.
- LE PLAY, F. Grundsätze der Eisenhüttenwerken und Holtz Be-
triebe. Translated by Carl Hartmann.
8vo. 247 pp. Freiberg, 1858.
- LESLEY, J. P. The Iron Manufacturer's Guide to the Furnaces,
Forges and Rolling Mills of the United States.
8vo. 772 pp. New-York, 1859.
- MAURER, E. Die Formen der Walz Kunst und das Façoneisen.
8vo. 286 pp. text; Atlas, LXVIII. plates. Stuttgart, 1865.
- Roh- und Zwischen Producte.
8vo. 22 pp. Stuttgart, 1868.
- MISCHLER, P. Das Deutsche Eisenhüttengewerbe von standpunkt
des Staatswirtschaften. 2 vols. 8vo. Stuttgart, 1854.

- MÜLLER, Hermann. Die Eisenerzlagerstätten des obern Harzgebirges und des Voigtlandes als Grundlagen zur Erhebung des Sächsischen Eisenhüttenwesens. 8vo. 36 pp. Freiberg, 1856.
- MUNICHSBORFER, Friedrich. Geschichtliche Entwicklung der Roheisen-Produktion in Kärnten. 8vo. 28 pp. Klagenfurt, 1873.
- MUSHET, David. Papers on Iron and Steel. Practical and Experimental. 8vo. 925 pp. London, 1840.
- OVERMAN, Frederick. Ueber das Frischen des Roheisens, nebst Anweisung. 8vo. 112 pp. Brunn, 1838.
- PERCY, John. Die Metallurgie. Vol. II. Translated and Edited by Dr. H. Wedding. Part I. 609 pp. 1864. Part II. 864 pp. 1873. Part III. Lieferungs, 1, 2. 8vo. Brunswick.
- Metallurgy. The Art of Extracting Metals from their Ores, and Adapting them to Various Purposes of Manufacture. Vol. II. Iron and Steel. 934 pp. 1864. 8vo. London, 1870.
- Traité Complet de Metallurgie. Translated under the auspices of the Author, with an Introduction and Appendix by Messrs. Pettigaud and A. Ronna. 5 vols. 8vo. Paris, 1864.
- PROFIL-ZEICHNUNGEN der Actien Gesellschaft für Eisen-Industrie zum Styrum. 17 lithographed charts, folio.
- des Eisen-und Stahlwerkes Reschitza Banat. 39 charts, folio.
- ROGERS, S. B. An Elementary Treatise on Iron Metallurgy. 8vo. 528 pp., XX. plates. London, 1857.
- RONGÉ, O. De la Fabrication de la Tôle en Belgique. 8vo. 88 pp., III. plates. Paris, 1863.
- SCHOTT, E. Kurzer Bericht über die bei der Wiener Weltausstellung, 1873, zur Anschauung gebrachten Eisen-Hütten-Producte, Eisen-und Stahlarbeiten. Vol. VIII., Pamphlets. Octavo series. 8vo. 34 pp. Leipzig, 1873.
- SCRIVENOR, Henry. History of the Iron Trade from the Earliest Records to the Present Period. 8vo. 327 pp. London, 1854.
- SIEMENS, C. W. On Puddling Iron. A Paper read before the British Association at Norwich, 1868. Vol. VII., Pamphlets. Octavo series. 8vo. 29 pp. London, 1871.
- Über Brennstoff—Über Gewinnung von Eisen und Stahl durch direktes Verfahren. 8vo. 70 pp., II. plates. Berlin, 1874.
- STAHLSCHEIDT, J. H. Darstellung des Eisen-hochofen-prozesses in Zahl und Bild. 8vo. 85 pp. Ferndorf, 1854.
- STYFFE, Knut. Berichte über die neuesten Fortschritte im Eisenhüttenwesen. 8vo. 79 pp., IV. plates. Leipzig, 1868.
- Die Festigkeits Eigenschaften von Eisen und Stahl. 8vo. 176 pp. Weimar, 1870.
- TRURAN, W. The Iron Manufacture of Great Britain. Second edition. 8vo. 306 pp., LXXXIV. plates. New-York, 1863.

- TUNNER, P. A. Treatise on Roll Turning for the Manufacture of Iron. Translated and Adapted by J. B. Pease.
2 vols. text and plates. New-York, 1869.
- Die Eisenhüttenwesen in Schweden.
8vo. 86 pp. Freiberg, 1858.
- Die Stabeisen und Stahlbereitung.
2 vols. 8vo. 297, 312 pp. Freiberg, 1858.
- Die Walzenkaliber für die Eisenfabrikation.
8vo. 94 pp., X. plates. Leipsig, 1867.
- URBIN, Ed. Guide for the Puddling of Iron and Steel. Vol. VII., Pamphlets. Octavo series. 8vo. 25 pp.
- VALERIUS, B. Theoretisch-praktisches Handbuch der Stabeisen Fabrikation. Durch bearbeitet von Carl Hartmann.
8vo. 606 pp. Freiberg, 1845.
- Supplement to above. 8vo. 143 pp. Freiberg, 1848.
- Second Supplement to above.
8vo. 150 pp. Freiberg, 1851.
- Theoretisch-praktisches Handbuch der Roheisen-Fabrikation. Durch bearbeitet von Carl Hartmann.
8vo. 734 pp., XXVIII. plates. Freiberg, 1851–1853.
- Supplement to above.
8vo. 241 pp., V. plates. Freiberg, 1851–1853.
- VORGELSANG, H. M. Lehrbuch der Eisen-Emailirkunst.
8vo. 86 pp., II. plates. Brunswick, 1851.
- WACHEER, L. Die Eisen-Erzeugung Oberschlesiens.
8vo. Oppeln, 1847–1851.
- WANGENHEIM, E. Der Bessemerprocess.
12mo. 148 pp. Weimar, 1863.
- Geschichte der Eisenhüttenwerke zu Malapane.
8vo. 120 pp. Glogaa, 1856.
- WARZÉE, André. Exposé Historique de L'Industrie du Fer dans la Province de Liège. Vol. VIII., Pamphlets. Octavo series.
8vo. 94 pp. Liege, 1861.
- WATHNER, J. Practischen Eisen und Eisenwarrenkennen von J. Koditek.
8vo. 230 pp. text; Atlas, XXI. plates. Gratz, 1860.
- WEDDING, H. Grundriss der Eisenhüttenkunde.
8vo. 308 pp. Berlin, 1871.
- WENIGER, K. A. Der Praktische Schmelzmeister.
8vo. 138 pp. Prag, 1864.
- WHITNEY, A. R. Sections of Iron Beams, &c., with Tables of weights, co-efficients, dimensions, &c.
2to. 65 pp. New-York.
- WOLFF, A. F. Die Verzinkung des Eisens.
12mo. 30 pp. Dresden, 1857.

See, also, under Metallurgy, Generalities, page 262.

Periodical Publications. See under Metallurgy, page 267.

STEEL.

AMERICAN Bureau of Mines Publications :

- Memoirs : 1. Our Mineral Interests. 2. Guide for the Puddling of Iron and Steel, by Ed. Urbin. Trans. by T. Eggleston, Jr. 3. On Bessemer Steel, by Adolph Schmidt. Vol. III., Pamphlets. Quarto series. 4to. 30 pp. New-York, 1866.

ANSIAUX, L., and Maison, L. *Traité pratique de la fabrication du fer et de l'acier puddlé.*

8vo. 282 pp., XXVIII. plates. Paris, 1865.

BRITISH Patent Office. *Abridgments of Specifications of Patents for*

——— Iron and Steel. 1621–1857, 271 pp. 1857–1865, 239 pp. 2 vols. 1857–1858.

BRITISH Patent Office. *Specifications of Patents for*

——— Manufacture of Iron and Steel. Robert McCall, Patentee.

5 pp., I. plate. 1855.

——— Manufacture of Steel, &c. J. Spence, Patentee.

7 pp., I. plate. 1859.

——— Treating and Manufacturing Iron and Steel. T. W. Dodds, Patentee.

10 pp., II. plates. 1853.

COMAN, L. E. *Das Bessemern in Schweden.*

8vo. 47 pp. Leipzig, 1864.

CHURCH, John A. *Notes of a Metallurgical Journey in Europe.*

8vo. 100 pp. New-York, 1873.

CIZANCOURT, M. de. *Études sur l'acier.* 8vo. 85 pp. Paris, 1863.

DESSOYE, J. B. J. *Guide de l'Emploi de L'Acier. Ses Propriétés.*

12mo. 304 pp. Paris, 1863.

EDE, George. *The Management of Steel, including Forging, Hardening, Tempering, Annealing, Shrinking and Expansion ; also, the Case Hardening of Iron.*

12mo. 41 pp. New-York, 1864.

EVERSMAN, F. A. A. *Übersichte der Eisen-und Stahl-Erzeugung, in so fern auf Wasserwerken vorgeht in den Ländern zwischen Lahn und Lippe.* Vol. II., Pamphlets. Quarto series.

4to. 104 pp. Dortmund, 1804.

GILL, Theodore. *Handbuch für Eisen-und Stahlarbeiter.*

12mo. 88 pp. Quedlinburg, 1834.

HARTMANN, Carl. *Die Practische Puddel-und Walzmeister.*

12mo. 427 pp. Weimar, 1861.

——— *Practisches Handbuch der Stahlfabrikation.*

12mo. 505 pp. Weimar, 1861.

HASSENFRATZ, J. H. *La Siderotechnie, ou L'Art de Traiter les Minerais de Fer pour en obtenir de la Fonte, du Fer, et de L'Acier.*

4 vols. 4to. Paris, 1812.

HEWITT, Abram S. *The Production of Iron and Steel in its Economic and Social Relations.*

8vo. 104 pp. Washington, 1868.

- KOHN, Ferdinand. Iron and Steel Manufacture.
4to. 270 pp., LXII. plates. London, 1869.
- KRUPP, Friederich. A descriptive pamphlet of the Cast Steel Works of Friederich Krupp, Essen, Germany. Vol. VIII., Pamphlets. Octavo series. 8vo. 24 pp. Essen, 1873.
- LANDRIN, H. C., Jr. A Treatise on Steel. Translated from the French by A. A. Fesquet. 12mo. 352 pp. Philadelphia, 1868.
- MUSIET, David. Papers on Iron and Steel. Practical and Experimental. 8vo. 925 pp. London, 1840.
- PERCY, John. Die Metallurgie.
Vol. II. Translated and Edited by Dr. H. Wedding. Part I. 609 pp. 1864. Part II. 864 pp. 1873. Part III. Lieferungs, 1, 2.
- Metallurgy. The Art of Extracting Metals from their Ores, and Adapting them to Various Purposes of Manufacture.
Vol. II. Iron and Steel. 8vo. 934 pp. London, 1864.
- Traité Complet de Metallurgie. Translated under the auspices of the Author, with an Introduction and Appendix by Messrs. Pettigaud and A. Ronna. 8vo. London.
- PROFIL-ZEICHNUNGEN der Actien Gesellschaft für Eisen-Industrie zum Styrium. 17 lithographed charts, folio.
- Das Eisen-und Stahlwerks Reschitza Banat. 39 charts, folio.
- STYFFE, Knut. Die Festigkeits Eigenschaften von Eissen und stahl. 8vo. 176 pp. Weimar, 1870.
- TERHUNE, R. H. Steel Rail Manufacture. Containing a Theoretical and Practical Description of the Bessemer Process. 8vo. Joliet, Ill., 1874.
- TUNNER, P. A. Die Stabeisen und Stahlbereitung. 2 vols. 8vo. Freiberg, 1858.
- URBIN, Ed. Guide for the Puddling of Iron and Steel. 8vo. 25 pp.
- WANGENHEIM, E. Der Bessemerprocess. 12mo. 148 pp. Weimar, 1863.
- See under International Expositions.*
Periodical Publications. See under Metallurgy—Generalities, p. 262.

GOLD AND SILVER.

- AMAIL, Victor. Manuel des Alliages d'Or et d'Argent. 8vo. 136 pp. Paris, 1860.
- BORN, J. E. von. Ueber das Anquicken der Gold-und Silberhältigen Erze, &c. 4to. 227 pp. Vienna, 1786.
- FERBER, Johann Jacob. Nachricht von dem Anquicken der gold und silberhaltigen Erze, Kupersteine und Speisen in Ungarn und Böhmen. 24mo. 200 pp. Berlin, 1787.
- HUNT, T. Sterry, and Douglas, Jas., Jr. A New Process for the Extraction of Copper from its ores, with notes on the treatment of Gold and Silver ores. 8vo. 16 pp. Montreal, 1870.
- KENT, E. N. Description of his Patent Gold Separator and Amalgamator. Vol. I., Pamphlets. Duodecimo series. 12mo. 24 pp. New-York, 1863.

- KUSTEL, Guido. Nevada and California processes of Silver and Gold extraction. 8vo. 327 pp. San Francisco, 1863.
- LAUR, M. P. De la Production des Métaux Précieux en California. 8vo. 132 pp. Paris, 1862.
- PHILLIPS, J. Arthur. The Mining and Metallurgy of Gold and Silver. 8vo. 532 pp. London, 1867.
- PRIME, Frederick, Jr. Desilverization of Lead by Zinc. Vol. VII., Pamphlets. Octavo series. 8vo. 18 pp., II. plates. 1870.
- RUDOLPH, A. Die edlen Metalle und Schmucksteine. 8vo. 175 pp. Breslau, 1859.
- WINKLER. Die europäische Amalgamation der Silbererze und silberhaltigen Hüttenprodukte. 8vo. 210 pp. Freiberg, 1848.
See, also, Metallurgy—Generalities, p. 262.

COPPER, LEAD, TIN, ZINC, NICKEL AND COBALT.

- BRITISH Patent Office. Specifications of Patents for
 ——— Machinery for the Manufacture of Sheet Tin. J. H. Johnson, Patentee. 4 pp., I. plate. 1859.
 ——— Obtaining Nickel and Cobalt. H. H. Vivian, Patentee. 6 pp. 1857.
 ——— Smelting Zinc Ores. M. Schaffner, Patentee. 6 pp., II. plates. 1859.
- COSTE, Leon, and Perdonnet, Auguste. Mémoires Metallurgiques sur le Traitement des Minerais de Fer, d'Étain et de Plomb en Angleterre. 2 vols., text and plates. Paris, 1830.
- DER ZINK. 4to. 52 pp., XV. plates. Breslau, 1857.
- EBERMAYER, Edward. Ueber die Nickelgewinnung auf der Auro-rahütte bei Gladenbach. *Inaugural Dissertation.* 8vo. 33 pp. Gottingen, 1855.
- EGLESTON, Thomas. Tables to Illustrate the Metallurgical Lectures delivered at the School of Mines, Columbia College, New-York. Copper. 8vo. 91 pp., IV. plates. New-York, 1869.
- GENTH, F. A. Contributions to Metallurgy. No. 1, Analysis of Chinese Coins. Vol. VII., Pamphlets. Octavo series. 8vo. 6 pp.
- GURLT, A. Bemerkungen über die neueren Fortschritte des Kupferhüttenprozesses. 8vo. 42 pp. Freiberg, 1852.
- HARTMANN, Carl. Das Kupfer und das Zink. 8vo. 328 pp. Weimar, 1863.
 ——— Ueber die Eisen Kupfer Zinc und Bleihütten Betrieb. Drittes heft. 8vo. 188 pp., IV. plates. Leipzig, 1850.
- HUBERT, Alois von. Anleitung durch Colorimetrie den Kupperhalt von Erzen-und Hütten Producten. 8vo. 58 pp. Vienna, 1852.
- HUGHES, G. W. Report relative to the Working of Copper Ore. Vol. VII., Pamphlets. Octavo series. 8vo. 58 pp. Washington, 1844.
- HUNT, T. Sterry, and Douglass, Jas., Jr. A New Process for the Extraction of Copper from its ores, with notes on the treatment of Gold and Silver ores. 8vo. 16 pp. Montreal, 1870.

- KLEMMANN, L. Die Zinkgewinnung in Obeschlesien.
12mo. 43 pp. Breslau, 1860.
- LAMBORN, Robert H. A Rudimentary Treatise on the Metallurgy
of Copper. 12mo. 232 pp. London, 1860.
- LIEBENTRAU, L. Grundliche Anweisung zur Bearbeitung des
Kupfers, Zinks und Bleies.
12mo. 43 pp. Quedlinburg, 1841.
- MULLER, J. W., and Leucanchez, A. Nouvelle Méthode de Traite-
ment au Hautes Fourneaux à Cuivre.
8vo. 28 pp. Leige, 1861.
- PERCY, John. Die Metallurgie.
Vol. III. Translated and Edited by Dr. H. Wedding and Dr.
C. Rammelsberg. 371 pp. 4 vols. 8vo. Brunswick.
- Metallurgy. The Art of Extracting Metals from their Ores,
and Adapting them to Various Purposes of Manufacture.
Copper, Zinc, Brass, &c. 634 pp. 1861.
- Vol. III. Lead, including Desilverization and Cupellation.
567 pp. 8vo. London, 1870.
- Traité Complet de Metallurgie. Translated under the aus-
pices of the Author, with an Introduction and Appendix by
Messrs. Pettigaud and A. Ronna.
Tome III. 8vo. Paris, 1867.
- PFANNENSCHMIDT, L. Die Fabrikation des Zinkes.
16mo. 26 pp. Quedlinburg, 1837.
- PIGGOT, A. S. The Chemistry and Metallurgy of Copper.
12mo. 388 pp. Philadelphia, 1858.
- PRIME, Frederick, Jr. Desilverization of Lead by Zinc. vol. VII.,
Pamphlets. Octavo series. 8vo. 18 pp., II. plates. 1870.
- STEINBECK, Georg Victor Albert. Chemisch-Analytische Unter-
suchungen über die Veränderung, welche der Mansfelder
Kupferstein bei seiner Röstung Behufs Entsilberung durch
die Ziervogelsche Extractionsmethode leidet. *An Inaugural
Dissertation.* 12mo. 56 pp. Halle, 1862.
- TAYLOR, W. J. Manufacture of the Oxide of Zinc near Lancaster,
Pa. Vol. VII., Pamphlets. Octavo series. 8vo. 3 pp.
- WIBEL, Ferd. Das Gediogene Kupfer und das Rothkupfererz.
(Kupferoxydul.) Ein Beitrag zur Lehre den Erzlagertstätten.
8vo. 182 pp. Hamburg, 1864.
- See, also, Metallurgy—Generalities, p. 262.*

ASSAYING.

- BALLING, C. A. M. Die Probirkunde des Eisens und der Brennmaterialien. 8vo. 64 pp. Prag, 1868.
- BERTHIER, P. Handbuch der metallurgisch Analytische Chemie. 2 vols. 8vo. Leipsig, 1835, 1836.
- *Traité des essais par la voie sèche.* 2 vols. 8vo. Paris, 1834.
- BODEMAN, Th., and Kerl, Bruno. Anleitung zur Berg-und Huettenmännischen Probirkunde. 8vo. 580 pp. Clausthal, 1857.
- *A Treatise on the Assaying of Lead, Copper, Silver, Gold and Mercury.* Translated by W. Goodyear. 8vo. 214 pp. New-York, 1865.
- CRAMER, J. A. *Elements of the Art of Assaying Metals, with notes and observations by Cromwell Mortimer.* 12mo. 462 pp. London, 1764.
- DE RIVANCOURT, P. *Éléments de Chimie Docimastique.* 8vo. 317 pp. Paris, 1786.
- GÖPPERT, H. R., and Romer, F. Bericht über die Thätigkeit der allgemeinen naturwissenschaftlichen Sektion der schlesischen Gesellschaft im Jahre, 1859. 4to. 16 pp.
- HARKORT, Edward. Die Probirkunst mit dem Löthrohre. Heft 1. Die Silberproben. 12mo. 107 pp., III. plates. Freiberg, 1827.
- HARTMANN, Carl. Die Probirkunst. 12mo. 365 pp. Weimar, 1862.
- HOLLUNDER, C. F. Besuch einer Anleitung zur mineralogischen Probirkunst. 3 vols. 12mo. Nuremberg, 1826, 1827.
- KERL, Bruno. Metallurgische Probirkunst. 8vo. 512 pp. Leipsig, 1866.
- MITCHELL, John. *A Manual of Practical Assaying.* Edited by William Crookes. 8vo. 902 pp. New-York, 1872.
- *Manual of Assaying.* Third edition. 8vo. 697 pp. London, 1868.
- MULDER, G. J. Die Silber Probir-Methode. 8vo. 328 pp. Leipsig, 1828.
- OVERMAN, Frederick. *Practical Mineralogy, Assaying and Mining.* 8vo. 230 pp. Philadelphia, 1863.
- PLATTNER, Carl Friederich. Beiträge zur Erweiterung der Probirkunst. 12mo. 106 pp. Freiberg, 1849.
- RIVOT, E. L. Docimasiae. *Traité d'Analyse des Substances Minérales.* 4 vols. 8vo. Paris, 1864–1866.
- SAGE. *Éléments de Mineralogie Docimastique.* 12mo. 275 pp. Paris, 1772.
- SILVERSMITH, J. *A Practical Hand-Book for Miners, Metallurgists and Assayers.* 8vo. 271 pp. New-York, 1866.
- VAUQUELIN, L. N. *Manuel de L'Essayeur.* 4to. 80 pp. Paris, 1834.
- WEHRLE, A. Lehrbuch der Probir und Hüttenkunde. 2 vols. 8vo. text; Atlas, XXVII. plates. Vienna, 1841.

PERIODICAL PUBLICATIONS.

See under Metallurgy—Generalities, p. 262.

NATURAL HISTORY.

GENERALITIES.

- AGASSIZ, Louis. *Methods of Study in Natural History.*
8vo. 319 pp. Boston, 1866.
- BRONN, H. G. *Handbuch einiger Geschichte der Natur.*
5 vols. 8vo. text, with 4to. atlas. Stuttgart, 1841-1843.
- COUPER, N. *Investigations of a Naturalist between Mingan and Watchiconti, Labrador.* Vol. XXX., Pamphlets. Octavo series.
8vo. 14 pp. Quebec, 1868.
- FOURCROY, A. F. *Éléments d'Histoire Naturelle et de Chimie.*
5 vols. 12mo. Paris, 1793.
- HISTOIRE Naturelle de Jura et des Departments Voisins. Tome I. *Première Fascicule.* Ogerien, Le Frere. *Geographie, Physique, Meteorologie, Agriculture, Minerale, Mineralogie, Petrologie et Palæontologie.* 8vo. Paris, 1863.
- LEUCKART, F. S. *Allgemeine Einleitung zur Naturgeschichte der drei Reiche.* 12mo. 130 pp. Stuttgart, 1832.
- SCHOEDLER, Friederich. *Das Buch der Natur, die Lehren der Physik, Astronomie, Chemie, Mineralogie, Geologie, Botanik, Zoologie und Physiologie.* 8vo. 614 pp. Brunswick, 1874.

PERIODICAL PUBLICATIONS.

[Referred to under Botany and Vegetable Physiology; Geology and Geognosy, Local Geology and Geognosy, Palæontology, Mineralogy, Economic Geology, and Zoology and Animal Physiology.]

- ABHANDLUNGEN der Kaiserlichen Königlichen Geologischen Reichsanstalt.
Vols. I. to VI.; VII., hefts 1, 2, 1852 to 1873. 4to. Vienna.
- AMERICAN Journal of Mining, Milling, Oil-Boring, Geology, Mineralogy, Metallurgy, &c.
4to. Weekly. Two vols. a year. New-York.
Vols. I.; IV. to VII., 1866 to 1869.
- AMERICAN Museum of Natural History. *First Annual Report for the year 1870.* Vol. XXV., Pamphlets. Octavo series.
8vo. 29 pp. New-York, 1870.
- ANNALS of Philosophy; or, Magazine of Chemistry, Mineralogy, Mechanics, Natural History, Agriculture and the Arts.
Edited by THOMAS THOMSON. 8vo. Two vols. a year. London, 1813 to 1826.
First Series. Vols. I. to XII., 1813 to 1818.
Second Series. Vols. VI. to X., 1823 to 1825.

ANNUAL Report of the Regents of the University of the State of New-York on the Condition of the State Cabinet of Natural History for the years 1847 to 1873.

● **Appendices D. and E.** to the Sixteenth Annual Report for the year 1863. 29 vols. 8vo.

ANNUAL Report of the State Mineralogist of the State of Nevada, for the year 1867. 8vo. 151 pp. Carson City, 1867.

ANNUAL Report of the Trustees of the Museum of Comparative Anatomy of Harvard College in Cambridge; together with the Report of the Director for the year 1867. 8vo. 22 pp. Boston, 1867.

BIBLIOTHECA Historico—Naturalis, Physico-Chemica et Mathematica. A Classified Catalogue of all Books on Natural History, Chemistry and Mathematics published in Germany, England, France, Netherlands, etc.

Edited by Dr. A. METZGER. 12mo. Two Nos. annually, January and July. Göttingen, 1851 to date.

1857 to 1874.

THE BRITISH Almanac and Companion of the Society for the Diffusion of Useful Knowledge, for the years 1828 to 1868. 41 vols. 12mo. London.

BULLETIN de la Société de L'Industrie Minerale. Paris.

First Series. Vols. I. to IV.; VIII. to XV., 1855 to 1870.

Second Series. Vols. I. to IV., 1870 to 1874.

BULLETIN de la Société Géologique de France.

Tomes I. to XXIV., 1843 to 1866.

BULLETIN de la Société Industrielle de Mulhouse.

Vols. XLIII., XLIV., 1873, 1874. Vol. XLV., 1875, January to June.

BULLETIN des Sciences Naturelles et de Géologie. Deuxième section du Bulletin Universel des Sciences et de l'Industrie publié sous la direction de M. LE BARON DE FERUSSAC.

8vo. Four vols. a year.

Vols. I. to IX.; XIII., XIV.; XVI., XVII., 1824 to 1829.

THE CANADIAN Naturalist and Geologist, and Proceedings of the Natural History Society of Montreal.

First Series. Vols. IV. to VIII., 1856 to 1863.

Second Series. Vols. III. to VI., 1864 to 1874; Vol. VII., parts 1 to 6; and 8, May, 1872, to July, 1875.

THE EDINBURGH Philosophical Journal, exhibiting a view of the progress of discovery in Natural Philosophy, Chemistry, Natural History, Practical Mechanics, Geography, Statistics, and the fine and useful Arts.

Edited by Dr. BREWSTER and Prof. JAMESON. 8vo. One vol. a year. Edinburgh, 1819 to date.

Vols. IX. to XIII., 1823 to 1825.

THE GEOLOGICAL Magazine.

Founded under the title :

THE GEOLOGIST; a Popular Illustrated Monthly Magazine of Geology.

Edited by S. J. MACKIE. 8vo. Monthly. One vol. a year. London, 1858 to 1864.

1862, 1863, 1864. Continued under the title :

THE GEOLOGICAL MAGAZINE.

Edited by HENRY WOODWARD, Prof. JOHN MORRIS, and ROBERT ETHERIDGE. 8vo. Monthly. One vol. a year. London, 1864 to date.

First Series. Vols. IV. ; VI. to X., 1864 to 1873.

Second Series. Vol. I., 1874. Vol. II., 1875, Jan. to June.

HARDWICKE'S Science Gossip. A Monthly Medium of Interchange and Gossip, for Students and Lovers of Nature.

4to. Monthly. One vol. a year. 1865 to date.

Vols. I. to X., 1865 to 1875.

JAHRBUCH der Kaiserlichen Königlichen Geologischen Reichsanstalt.

Vols. I. ; III. ; IX. to XXIV. ; 1850 to 1874.

18 vols. Royal 8vo. Vienna.

JAHRBUCH für Mineralogie, Geologie und Palæontologie.

Edited by LEONHARD and GEINITZ. 8vo. Stuttgart.

1830 to 1857 ; 1867 to 1871. General Index, (subjects, authors and places,) for the years 1860 to 1869.

JOURNAL of the Academy of Natural Sciences of Philadelphia.

Second Series. Vols. IV., 4to., (Parts 2, 3, 4.) V., VI., (Part 1.) Philadelphia, 1862 to 1866.

JOURNAL of the Franklin Institute.

First Series, under the title :

THE FRANKLIN JOURNAL AND AMERICAN MECHANICS' MAGAZINE. Devoted to the Useful Arts, Internal Improvements, General Science, and the Recording of American and other Patented Inventions. Under the Patronage of the Franklin Institute of the State of Pennsylvania.

Edited by THOMAS P. JONES. 8vo. Two vols. a year. Philadelphia, 1826, 1827.

Second Series, under the title :

JOURNAL OF THE FRANKLIN INSTITUTE OF THE STATE OF Pennsylvania, and Mechanics' Register. Devoted to Mechanical and Physical Science, Civil Engineering, the Arts and Manufactures, and the Recording of American and other Patented Inventions.

Edited by THOMAS P. JONES. 8vo. Two vols. a year. Philadelphia, 1828 to 1840.

Vols. XV. to XVIII. ; XX., XXI., XXII. ; XXIV.—1835 to 1840.

Third Series, under the title :

JOURNAL OF THE FRANKLIN INSTITUTE OF THE STATE OF Pennsylvania, for the Promotion of the Mechanic Arts. Devoted to Mechanical and Physical Science, Civil Engineering, the Arts and Manufactures. 1841 to date.

Edited by THOMAS P. JONES and JOHN F. FRAZER.

Vols. I., II., III., VI., VIII. ; and LIII. to LXIX.—1841 to 1875.

LONDON, Edinburgh and Dublin Philosophical Magazine.

First Series: The Philosophical Magazine: comprehending the various branches of Science, the Liberal and Fine Arts, Geology, Agriculture, Manufactures and Commerce.

Edited by ALEXANDER TILLOCH. 1789 to 1813.

Vols. I. to XLII., 1789 to 1813.

Second Series: The Philosophical Magazine and Journal: comprehending the various branches of Science, the Liberal and Fine Arts, Agriculture, Manufactures and Commerce.

Edited by RICHARD TAYLOR. 1814 to 1826.

Vols. XLIII. to XLVII.; Vols. LXII., LXIII., LXIV., LXVI., 1814 to 1825.

Third Series: The London and Edinburgh Philosophical Magazine and Journal of Science.

Edited by Sir DAVID BREWSTER, RICHARD TAYLOR, RICHARD PHILIPS, Sir ROBERT KANE and EDWARD WILLIAM BRAYLEY.

Vols. IV., V., VI., VII., XIX., XXI., and XXIV. to XXXVII., 1834 to 1850.

Fourth Series: The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science.

Edited by Sir ROBERT KANE, Sir WILLIAM THOMPSON and WILLIAM FRANCIS. 8vo. Monthly. Two vols. a year. 1851 to date.

Vols. I. to XLIX., 1851 to 1875.

Supplemental volume to Vols. XXII. to XXVI., 1861 to 1863.

MAGAZIN für die Oryktographie von Sachsen. Ein Beytrag zur Mineralogischen Kenntniss dieses landes und zur Geschichte seiner Mineralien.

Edited by JOHANN CARL FREIESLEBEN. 8vo. Published irregularly. Freiberg, 1828.

Hefts I. to XV., 1828 to 1848.

Supplemental Hefts I. to IV., 1843 to 1848.

MEMOIRS of the National Academy of Sciences.

Vol. I., 1866.

4to. Washington.

THE MONTHLY Microscopical Journal. Transactions of the Royal Microscopical Society of London, and Record of Histological Research at Home and Abroad.

Edited by HENRY LAWTON. 8vo. Monthly. Two vols. a year. London, 1869 to date.

Vols. I. to XII., 1869 to 1874; Vol. XIII., 1875, January to June.

NATURE. A Weekly Illustrated Journal of Science.

4to. Two vols. a year. London, 1869 to date.

Vols. I. to VII.; Vol. X., 1869 to 1874. Vol. XI., 1875, January 2, to June 26.

NATURKUNDIGE Verhandelingen van den Hollandisch Maatschappij der Wetenschappen te Haarlem.

Tweede Verzameling Vijfde Deel.

4to. 75 pp., V. charts. Haarlem, 1849.

NATURWISSENSCHAFTLICHE Abhandlungen.

Collated and published by WILLIAM HAIDINGER. Vienna.

Vols. II., III., IV., 1848, 1849, 1850. 4to. Vienna.

POPULAR Science Monthly.

Conducted by E. L. YOUNG. Imp. 8vo. Monthly. Two vols. a year. New-York, 1872 to date.

Vols. I. to V., 1872 to 1874.

PROCEEDINGS and Transactions of the Institute of Natural Science of Halifax, Nova Scotia.

Vol. III., (part 4,) 1874. 8vo. *Halifax*.

PROCEEDINGS of the Academy of Natural Sciences of Philadelphia.

Vols. I. to XVIII., 1841 to 1866.

18 vols. 8vo. Philadelphia.

PROCEEDINGS of the American Association for the Advancement of Science.

First Meeting at Philadelphia,	1848.	<i>Philadelphia</i> ,	1849.
Second " Cambridge,	1849.	<i>Boston</i> ,	1850.
Third " Charleston,	1850.	<i>Charleston</i> ,	1850.
Fourth " New-Haven,	1850.	<i>Washington</i> ,	1851.
Fifth " Cincinnati,	1851.	"	1851.
Sixth " Albany,	1851.	"	1852.
Seventh " Cleveland,	1853.	<i>Cambridge</i> ,	1856.
Eighteenth " Salem,	1869.	"	1870.
Twentieth " Indianapolis,	1871.	"	1871.
Twenty-first " Dubuque,	1872.	"	1872.
Twenty-third " Hartford,	1874.	<i>Salem</i> ,	1875.

PROCEEDINGS of the Essex Institute.

Vols. II., Part 1, 1856-1857; IV., 1864-1865; V., 1866-1867; VI., 1868. 8vo. Essex, Mass.

THE QUARTERLY Journal of Science.

Edited by WILLIAM CROOKES. 8vo. Quarterly. One vol. a year. London, 1864 to date.

Vols. IV., VI. to XI., 1867 to 1874. Vol. XII., 1875, parts 1 and 2.

QUARTERLY Journal of the Geological Society of London.

Vols. XXIII., XXIV., XXV., 1867, 1868, 1869; XXVII., XXVIII., XXIX., 1871, 1872, 1873; XXX., 1875, parts 1 and 2.

REPERTORIUM Commentationum a Societatibus Litterariis Editarum. Secundum Disciplinarum Ordinem digessit I. D. Reuss.

(A valuable collection of the Transactions of Philosophical Societies from the earliest times to the date of publication.)

16 vols. 4to. Göttingen, 1801-1821.

Vol. I. Scientia Naturalis. Historia Naturalis Generalis et Zoologica.

Vol. II. Botanica et Mineralogia.

REPERTORIUM der Technischen, Mathematischen und Naturwissenschaftlichen Journal-Literatur.

Published by F. SCHOTTE. 8vo. Monthly, One vol. a year. Leipsig, 1869 to date.

1869, 1870, 1871. Index to vol. for 1870.

REPORT of the British Association for the Advancement of Science. Reports of the First to Forty-first Meeting.

40 vols. 8vo. London, 1832 to 1872.

REPORT of the National Academy of Sciences for the year 1863.

8vo. Washington, 1874.

REPORTS embracing Proceedings and Transactions of the First and Second Meetings of the Association of American Naturalists and Geologists, held at Philadelphia, in 1840 and 1841; and of the Third Meeting, held at Boston in 1842.

8vo. Boston. 1843.

REVUE de Geologie.

Edited by MM. DELESSE, DE LAPPARENT and LAUGEL. 8vo. Annually. Paris, 1860 to date.

Vols. I., V., VII., VIII., 1860 to 1868.

REVUE des Cours Scientifiques de la France et de L'Étranger. Physique, Zoologie, Botanique, Anatomie, Physiologie, Géologie, Palæontologie, Médecin.

4to. Weekly. One vol. a year. Paris, 1863 to date.

First Series, (1863 to 1870.)

Vols. I. to V., 1864 to 1868.

Second Series: *Revue Scientifique de la France et de L'Étranger.*

Two vols. (two parts each) a year. 1871 to date.

Vols. I. to VII., 1871 to 1874. Vol. VIII., 1875, Jan. to June.

SCIENTIFIC American. A Weekly Journal of Practical Information, Arts, Science, Chemistry and Manufactures.

Folio. Weekly. Two vols. a year. 1815 to date.

First Series. Vols. II. to XIV., 1816 to 1858.

Second Series. Vols. I. to XVIII.; XXI. to XXXII., 1859 to 1875.

SITZUNGSBERICHT der Mathematisch Naturwissenschaftlichen Classe der Kaiserlichen Akademie der Wissenschaften.

Zweite Abtheilung. Abhandlungen aus dem Gebiete der Mineralogie, Botanik, Zoologie, Geologie und Palæontologie.

Vols. LXV. to LXVIII., 1872, 1873. 8vo. Vienna.

TRANSACTIONS of the Academy of Science, St. Louis.

Vol. I., 1856 to 1860; Vol. II., 1861 to 1868.

TRANSACTIONS of the Edinburgh Geological Society.

Vol. II., Part 3.

THE WORKS of the Palæontographical Society, London.

Vols. I. to XX., 1847 to 1866; XXII., 1868; XXIV., XXV., 1870, 1871. 23 vols. 4to. London, 1848 to 1871.

THE YEAR Book of Facts in Science and Art: exhibiting the most Important Discoveries and Improvements of the past Year in Mechanics and the Useful Arts; Natural Philosophy; Electricity; Chemistry; Zoology and Botany.

Edited by JOHN TIMBS. 12mo. Published annually. London.

1839 to 1863; 1871.

Supplemental Volumes: Vol. 1, for the year 1851. The Great Exhibition, London, 1851.

Vol. 2, for the year 1862. The International Exhibition, London, 1862.

ZEITSCHRIFT der Deutschen Geologischen Gesellschaft zu Berlin.
Vols. II., IX. to XXIII., and XXVI., 1849 to 1874.

AGRICULTURE.

BENTZ, L. Elements of Agriculture. 12mo. Philadelphia, 1852.

BERICHTE über die Welt-Ausstellung zu Paris, im Jahre, 1867.

Band V. Land und Forstwissenschaft. 8vo. Vienna, 1869.

BRITISH Patent Office. Abridgments of Specifications of Patents for Manure. 55 pp. 1857.

COLMAN, Henry. Agriculture of the United States. An Address delivered 14th April, 1841, before the American Institute in New-York. 8vo. New-York, 1841.

CHYNOWETH, J. B., and Bruckner, W. A. American Manures and Farmers' and Planters' Guide. 12mo. 260 pp. Philadelphia, 1871.

CRONISE, Titus Fey. The Agricultural and Other Resources of California. 8vo. San Francisco, 1870.

DANA, S. L. Manures. A Prize Essay. 12mo. Lowell, 1844.

DAVY, Sir Humphrey. Elements of Agricultural Chemistry, with a Treatise on Soils and Manures. 8vo. 396 pp. Philadelphia, 1821.

FLAGG, Melzer. Remarks on the Culture of the Grape, and the Manufacture of Wine in the Western States, comprised in a report made by direction of the Cincinnati Horticultural Society. 8vo. 32 pp. Cincinnati, 1846.

FRYATT, N. H. Agriculture, its Essentials and Non-Essentials. Including an Examination of the Properties of Guano and other Manures. 8vo. 48 pp. New-York, 1854.

GOESSMAN, C. A. Salt and its Uses in Agriculture. vol. XVI., Pamphlets. Octavo series. 24 pp. 1869.

JOHNSON, George W. Muck for the Many; or, the Economy of House Sewage: Showing that the Sewage of every Household is Manure Sufficient for the Production of all its Vegetable Food. 32mo. 24 pp. London.

KIRSTEN, G. Katechismus der Binenkunde und Bienenzucht. 16mo. 156 pp. Leipsig, 1852.

- LACROIX, Eugène. *Études sur L'Exposition de 1867, ou Les Archives de L'Industrie aux XIX. Siècle. Description Générale, Encyclopédique, Méthodique et Raisonnée de L'État Actuel des Arts, des Sciences, de l'Industrie et de l'Agriculture, chez tous les Nations.*
10 vols. 8vo., text and plates. Paris, 1867–1869.
- NATURAL History of the State of New-York—Reports on the Part V., Agriculture. Emmons, Ebenezer.
Parts 1; 2; 3 (text and plates); 4; 5. 6 vols. 4to. 1843.
- PERRAULT, J. *Revue Agricole, Manufacture, Commerciale et de Colonisation.* 8vo. 384 pp. Montreal, 1863, 1864.
- PETERS, Theodore C. *A Report on the Agricultural and other Resources of the State of New-York.* 8vo. 152 pp. Albany, 1864.
- PRATT, N. A. *Ashley River Phosphates. History of the Marls of South Carolina, and of the Discovery and Development of the Native Bone Phosphates of the Charleston Basins.* 8vo. 28 pp. Philadelphia, 1868.
- PUGH, E. *A Report upon a Plan for the Organization of Colleges of Agriculture and the Mechanic Arts, with special reference to the Organization of the Agricultural College of Pennsylvania.* Vol. XVIII., Pamphlets. Octavo series. 8vo. 35 pp. Harrisburgh, 1864.
- REED, William. *The History of Sugar and Sugar Yielding Plants.* 12mo. 206 pp. London, 1866.
- SCHULTZ, Fleeth T. *Der rationelle Ackerbau in seiner Begründung durch Ergebnisse der neueren Naturforschung.* 8vo. 455 pp. Berlin, 1856.
- STEPHENS, H. *Katechismus des practisches Ackerbaues.* Translated by — Hamm. 12mo. 110 pp. Leipsig, 1857.
- TOPHAM, J. *Chemistry made Easy, for the Use of Farmers.* 12mo. 44 pp. New-York, 1852.
- TRALL, R. T. *Tobacco; its History, Nature and Effects, with Facts and Figures for Tobacco Users.* 12mo. New-York, 1854.
- WAILLES, B. L. C. *Report on the Agriculture and Geology of Mississippi.* 8vo. 371 pp. 1854.
- WATERHOUSE, S. *The Resources of Missouri.* Vol. XXIV., Pamphlets. Octavo series. 8vo. 64 pp. St. Louis, 1867.
- WEINGEHEIMNISSE. 8vo. 48 pp. Nuremburg, 1858.
- WEINGEHEIMNISSE. *Zusammenstellung alle bisher oft sehr geheim gehaltener Mittel zur natürlichen und künstlichen Weinbereitung jeder Gattung.* 12mo. 123 pp. Nuremburg, 1858.

See, also, Agricultural Chemistry, p. 245.
International Exhibitions.

PERIODICAL PUBLICATIONS.

ABSTRACT of the Returns of the Agricultural Societies of the State of Massachusetts, for the years 1846, 1856, 1857, 1858.

4 vols. 8vo. Boston.

AMERICAN Year Book and National Register. Astronomical, Historical, Political, Financial, Commercial, Agricultural, Educational and Religious. A General Review of the United States, including every Department of the National Government and State Governments, together with a Brief Account of Foreign States.

Vol. I., 1869. Edited by David N. Camp.

8vo. 824 pp. Hartford, 1869.

ANNALES du Genie Civil, et Recueil de Mémoires sur les Ponts et Chaussées, les Routes et Chemins de Fer, les Constructions et la Navigation Maritime et Fluviale, l'Architecture, les Mines, la Metallurgie, la Chimie, la Physique, les Arts Mécaniques, l'Économie Industrielle, le Genie Rural. Publiées par E. Lacroix et des autres.

8vo. Monthly. One vol., text and plates, a year. Paris, 1862 to date.

First Series. Vols. I. to VII., (text and plates,) 1862 to 1868.

Second Series. Vols. XVI., (text and plates,) 1867; XVII., 1870 to 1871.

ANNUAL Report of the Commissioner of the Department of Agriculture, Washington, D. C., for the years 1861 to 1865.

5 vols. 8vo. Washington, D. C. Continued under the title: Monthly Reports of the Department of Agriculture. 1866 to 1874; 1875, January to July.

9 vols. 8vo. Washington, D. C.

ANNUAL Report of the Connecticut Board of Agriculture for the year 1868.

8vo. Hartford, 1868.

ANNUAL Report of the Ohio State Board of Agriculture, to the General Assembly of Ohio, with an Abstract of the Proceedings of the County Agricultural Societies.

Reports for the years 1855, 1856, 1858 to 1866; 1868, 1869.

13 vols. 8vo. Columbus.

ANNUAL Report of the State Board of Agriculture of the State of Massachusetts. Fourth to the Eighth Annual Reports, for the years 1856 to 1860.

5 vols. 8vo. Boston, 1857 to 1861.

LE GENIE Industriel. Revue des Inventions Françaises et Étrangères. Annales des Progrès de l'Industrie Agricole et Manufacturière, Biographie des Inventions, &c., par Armengaud Frères.

8vo. Two vols. a year. Paris, 1851 to date.

Vols. XXIII. to XXXIV., 1862 to 1867.

THE JOURNAL of the New-York State Agricultural Society.

Vols. XV., XVI., XVII. to XXIII., 1865 to 1873.

TRANSACTIONS of the Agricultural Societies of the State of Massachusetts, for the years 1847, 1848, 1849, 1851.

4 vols. 8vo. Boston, 1848 to 1852.

TRANSACTIONS of the Agricultural Society of the State of Wisconsin, for the years 1854, 1855, 1856, 1857.

4 vols. 8vo. Minneapolis.

TRANSACTIONS of the New-York State Agricultural Society for the years 1845 to 1868, (*lacking* 1846, 1847 and 1851.

BOTANY.

BENTHAM, G. An Address read at the Annual Meeting of the Linnean Society, May 24, 1867. Vol. XXVI., Pamphlets. Octavo series.

8vo. 24 pp. London, 1867.

BISCHOFF, Gottlieb Wilhelm. Lehrbuch der Botanik. "Heidelberger Naturgeschichte." 5 vols. 8vo. Stuttgart, 1834-1840.

CHENU, Dr. Encyclopédie D'Histoire Naturelle. Première Partie. Botanique. Tomes I, II. 2 vols. 4to. Paris.

CREDNER, Hermann. Die Kreide von New-Jersey. Vol. XIII., Pamphlets. Octavo series.

8vo. 6 pp., I. plate. Leipsig, 1870.

DEWEY, Chester, *and others*. Reports on the Zoology and Botany of Massachusetts. Vol. I. Report on the Herbaceous Flowering Plants, by Chester Dewey. 276 pp.

DIRECTIONS for Collecting Specimens of Natural History. *Smith. Misc. Coll.*

8vo. 103 pp. Washington, 1863.

FISCHBACH, H. Katechismus der Forst Botanik.

12mo. 232 pp. Leipsig, 1862.

GEINITZ, H. B. Darstellung der Flora des Hainischer-Ebersdorfer und des Floeher Kohlenbassins.

8vo. 80 pp., text; Atlas, XIV. plates. Leipsig, 1854.

GRAY, Asa. Introduction to Structural and Systematic Botany. Fifth edition.

8vo. 555 pp. New-York, 1869.

—— Manual of Botany of the Northern United States. Fifth edition.

8vo. 703 pp. New-York, 1870.

GRISEBACH, A. Grundriss der Systematischen Botanik.

8vo. 180 pp. Gottingen, 1854.

HISTOIRE Naturelle de Jura et des Departments Voisins. Tome II. Botanique. Michalet, E.

8vo. Paris, 1863.

HITCHCOCK, Edward. Report on the Geology, Mineralogy, Botany and Zoology of Massachusetts.

Part IV. Catalogue of Animals and Plants.

8vo. Amherst, 1833.

LINNÆUS, Carl von. Systema Vegetabilium. Edited by Curtis Sprengel. Sixteenth edition.

5 vols. 8vo. Gottingen, 1825-1868.

MÜLLER, E. Katechismus der landwertschaftlichen Botanik.

12mo. 174 pp. Leipsig, 1856.

NATURAL History of the State of New-York—Reports on the.

Part II. Botany. Torrey, John. Vols. 1, 2. 484, 572 pp.,

LVIII., CLXI. plates. 1843.

- PAINÉ, J. A., Jr. Catalogue of Plants found in Oneida County, N. Y., and Vicinity. Vol. XXVI., Pamphlets. Octavo series. 8vo. 140 pp. 1865.
- PEYRITSCHÉ, J. Über einige Pilze aus der Familie der Laboulbenien. 8vo. 12 pp. 1871.
- SACHS, Julius. Lehrbuch der Botanik. 8vo. 632 pp. Leipsig, 1868.
- SCHLEIDEN, M. J. Die Pflanze und ihr Leben. 8vo. 378 pp. Leipsig, 1855.
- UNITED STATES and Mexican Boundary Survey. Part II., Subdivision 1. Introduction by C. C. Parry. General Botany by John Torrey. *Cretaceæ* by George Engelman. 4to. Washington, 1859.
- WATSON, S., and Rothrock, J. T. Catalogue of Plants collected in the years 1871, 1872 and 1873, with Descriptions of New Species. 8vo. 62 pp. Washington, 1874.
- WIESNER, Julius. Untersuchungen über die herbstliche Entlaubung der Holzgewächse. 8vo. Vienna, 1871.
- See, also, Periodical Publications, p. 286.*

GEOGRAPHY, PHYSICAL AND POLITICAL.

- AICHHORN, Sigmund. Geographische Vertheilung des Schiefer, Schicht-und Wasser-Gebirges in Steiermark. Vol. I., Pamphlets. Duodecimo series. 12mo. 14 pp. Gratz, 1856.
- AUSKUNSTERTHEILUNG über Neu-Zeeland. Zum Gebrauch für Auswanderer. 12mo. London, 1873.
- BACHE, A. D. A Portfolio of VIII. Maps and Charts, illustrating the Isthmus of Tehuantepec. New-York, 1852.
- BARTHOLOMEW, John. A Descriptive Hand Atlas of the World. 4to. 275 pp., LVII. plates. Philadelphia, 1873.
- BERGHAUS, H. Physikalischer Atlas. 2 vols. 4to. Gotha, 1852.
- BEUTÉ, E. Études sur le Peloponnèse. 8vo. 481 pp. Paris, 1855.
- BUCH, Leopold von. Physikalische Beschreibung der Canarischen Inseln. 4to. 407 pp. Berlin, 1825.
- CASE, O. D. Map of the United States and the British Provinces, Mexico and Part of the West Indies. Compiled from the latest Government Maps and other Official Sources. 5 by 6 feet. Hartford, 1874.
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- DER Kolonie Victoria, ihre Geographie, Politik, Land u. Hirtenwirthschaft und ihren Bergbau betreffend. 12mo. 1873.
- DUMARTRAY and Rouhard. Coup D'Œil sur la Republique de l'Amerique Centrale. 4to. Paris, 1832.
- GEOGRAPHICAL and Geological Explorations and Surveys West of the One Hundredth Meridian. *First Lieut.* Geo. M. Wheeler in charge. Report of Progress in 1872. 4to. 56 pp. Washington, 1874.

- GUYOT, Arnold. On the Appalachian Mountain System.
8vo. 31 pp., with a map. New-Haven, 1861.
- HITCHCOCK, Edward. Report on the Geology of Vermont, Descriptive, Theoretical, Economical and Scenographical. Vol. II.
Part 10. Physical Geography and Scenery.
Claremont, N. H., 1861.
- HUMBOLDT, Alexander von. Atlas Geographique et Physique du Royaume de la Nouvelle Espagne.
Folio. XX. plates and maps. Paris, 1812.
- MACEDO, Joaquim Manoel de. Notions de Chorographie du Brézil.
Traduction de J. F. Holbout. 8vo. 504 pp. Leipsig, 1874.
- MAP of Yeddo, Capital of Japan. 20 by 30 inches.
- MATKOVIE, Peter. Kroatien-Slavonien nach seinen Physischen und Geistigen Verhältnissen. Denkschrift zur Wiener Weltausstellung, 1873. 12mo. 112 pp. Agram, 1873.
- SCHICKH, Melchior E. v. Anleitung zur zweckmässigsten Bereisung der Semring-Eisenbahn von Gloggnitz bis Mürzzuschlag.
Vol. VI., Pamphlets. Octavo series.
12mo. 14 pp., I. plate. Vienna, 1861.
- SCHMIDT, J. C. E. Lehrbuch der mathematischen und physikalischen Geographie. 2 vols. 12mo. Gottingen, 1829, 1830.
- STUDER, B. Lehrbuch der physikalischen Geographie und Geologie. 8vo. 526 pp. Bern, 1844.
- VON BUCH, L. Physikalische Beschreibung der Canarischen Inseln. 4to. 407 pp., text; Atlas, XIII. plates. Berlin, 1825.
- VON KRUSENSTEIN, Paul. Geographische Bestimmungen. 4to. 148 pp. St. Petersburg, 1846.

See, also, International Exhibitions.
Periodical Publications, p. 286.

GEOLOGY AND GEOGNOSY.

GENERALITIES.

- AGASSIZ, Louis. Contemplations of God in the Kosmos.
8vo. 17 pp. 1851.
- Contributions to the Natural History of the United States.
On the Origin of the Species. 8vo. 15 pp. New-Haven, 1860.
- Études sur les Glaciers.
8vo. 346 pp.; Atlas, XVIII. plates. Neuchatel, 1840.
- Geological Sketches. 12mo. 311 pp. Boston, 1867.
- The Primitive Diversity and Number of Animals in Geological Times. 8vo. 16 pp. New-Haven, 1854.
- AGRICOLÆ, Georgii. De ortu et causis subterraneorum; De natura eorum quæ effluunt ex terra; De natura fossilium; De ueteribus et novis metallis. Bermannus, sive De re metallica Dialogus. Interpretatio Germanica nova rei metallicæ, addito Indice foecundissimo.
4to. 827 pp., III. plates. Basileæ, 1546.
- BACH, II. Die Theorie der Bergzeichnung in Verbindung mit Geognosie, oder Anleitung zur Bearbeitung und zum Richtigen Verständnisse Topographisch-Geognostischer Karten.
4to. 72 pp., XXIII. plates. Stuttgart, 1853.
- BEITRÄGE ZUR Geognostischen Kenntniss des Harzgebirges.
Herausgegeben durch die Hierzu Bestellten Commission.
Hefts I., 1865; II., 1867; III., 1869. 8vo. Freiberg.
- BIBRA, E. F. v. Die Bronzen und Kupferlegirungen der Alten und Ältesten Völker. 8vo. 210 pp. Erlangen, 1869.
- BOCKER, Dr. Untersuchungen über Die Wirkung des Wassers.
Vol. III., Pamphlets. Quarto series. 4to. 100 pp. 1853.
- The same as above. 2 Pamphlets. 8vo. Berlin, 1866.
- BROGMART, A. Tableau des Terrains qui Composent L'Ecorce du Globe, ou Essai sur la Structure de la Partie Connue de la Terre. 8vo. 435 pp. Paris, 1829.
- BRONN, H. G. Handbuch einiger Geschichte der Natur.
5 vols. 8vo. text, with 4to. atlas. Stuttgart, 1841-1843.
- Lethæa Geognostica oder Abbildung und Beschreibung der Für die Gebirgs-Formationen Bezeichnendsten Versteinerungen. Dritte Auflage bearbeitet von H. G. Bronn und F. Roemer.
Atlas. 12 Lieferungs, CXIX. plates. Stuttgart, 1850-1856.
- BURMEISTER, Hermann. Geschichte der Schöpfung Eine Darstellung des Entwicklungsganges der Erde und Ihrer Bewohner.
8vo. 608 pp. Leipzig, 1851.
- Geschichte der Schöpfung. 8vo. 664 pp. Leipzig, 1867.

- CLEAVELAND, Parker. An Elementary Treatise on Mineralogy and Geology. 8vo. 668 pp. Boston, 1816.
- The same. 2 vols. 8vo. Boston, 1816.
- COCKBURN, William. A New System of Geology. 12mo. 61 pp. London, 1849.
- COTTA, Bernhard von. Die Lehre von der Erzlagertstätten. 8vo. 742 pp. Freiberg, 1859.
- Katechismus der Geologie. 12mo. 124 pp. Leipsig, 1861.
- DANA, J. D. A Text Book of Geology. 12mo. 354 pp. Philadelphia, 1864.
- Manual of Geology. Treating of the Principles of the Science, with special reference to American Geological History. 8vo. 800 pp. Philadelphia, 1860.
- Notes on Some of the Phenomena of the Glacial Era and their Origin; in Book Notices. 8vo. 7 pp. 1875.
- On Dr. Koch's Evidence with regard to the Contemporaneity of Man and the Mastodon in Missouri. 8vo. 13 pp. 1875.
- On the Glacial and Champlain Eras in New-England. Vol. XV., Pamphlets. Octavo series. 8vo. 16 pp. 1873.
- DE LA BECHE, H. T. Researches in Theoretical Geology. 16mo. 408 pp. London, 1834.
- Same as above. With notes by Prof. Edward Hitchcock. 16mo. 342 pp. New-York, 1837.
- D'HALLOY, J. J. D'O. Éléments de Geologie ou Seconde Partie des Elements D'Histoire Naturelle Inorganique. Second edition. 8vo. 740 pp., I. chart. Paris, 1835.
- Précis Élémentaire de Geologie. Eighth edition. 8vo. 638 pp. Brussels, 1868.
- D'ORBIGNY, Alcide. Cours Élémentaire de Paleontologie et de Geologie Stratigraphique. 3 vols. 12mo. text; 1 vol. 4to. plates. Paris, 1849–1852.
- FIGUIER, Louis. The World before the Deluge. 8vo. 448 pp. New-York, 1866.
- FORBES, James D. Occasional Papers on the Theory of Glaciers. 8vo. 278 pp. Edinburgh, 1859.
- GEOLOGY and Geologists; or, Visions of Philosophers in the Nineteenth Century. 8vo. 33 pp. London, 1843.
- GLOCKER, E. F. Ueber die Nordischen Geschiebe Oderebene um Breslau. Vol. VII., Pamphlets. Quarto series. 4to. 82 pp. 1853.
- Ueber einige Erscheinungen an Kalkspathformen. Vol. VII., Pamphlets. Quarto series. 4to. 24 pp., II. plates. 1851.
- GOMANOWSKI, G. A Geognostical pamphlet, in Russian. 8vo. 18 pp., IV. maps. St. Petersburg, 1863.
- GREENWOOD, George. Rain and Rivers; or, Hutton and Playfair against Lyell and all comers. 8vo. 237 pp. London, 1866.
- GUARINI, Palmieri, and Scacchi. Memoria sullo incendio Vesuviano. 4to. 207 pp. Naples, 1855.
- HENWOOD, W. J. Observations on Metalliferous Deposits and on Subterranean Temperature. 8vo. Text, 916 pp. 1 vol. plates and tables. Penzance, 1871.

- HUMBOLDT, Alexander von. Essai Geognostique sur le Gissement des Roches dans les Deux Hemispheres.
8vo. 379 pp. Paris, 1823.
- Fragmens de Géologie et de Climatologie Asiatique.
8vo. 2 vols. in one. 640 pp. Paris, 1831.
- Kosmos. Entwurf einer physischen Weltbeschreibung.
4 vols. 24mo. Stuttgart and Augsburg, 1845, 1847, 1850, 1858.
- HUNT, Robert A. A Descriptive Guide to the Museum of Practical Geology, with notices of the Geological Survey of the United Kingdom, the Government School of Mines, and the Mining Record Office.
12mo. 298 pp. London, 1859.
- IRVING, Roland. The Age of the Quartzites, Schists and Conglomerates of Sauk Co., Wis. Vol. XV., Pamphlets. Octavo series.
8vo. 9 pp., I. map. 1872.
- JOHNSON, James F. W. Elements of Agricultural Chemistry and Geology. Seventh edition.
12mo. 410 pp. Edinburgh, 1856.
- JOHNSTRUP, F. Om Hævningsfænomenene, i Moens Klint.
12mo. 45 pp., I. plate. Copenhagen, 1874.
- KAISERLICHEN Königlich-Geologischen Reichsanstalt—Catalogue ihrer Ausstellungsgegenstände bei der Wiener Weltausstellung.
8vo. 200 pp. Vienna, 1873.
- KEYSERLING, A. G. Geognostische Beobachtungen.
2 vols. 4to. text and plates. St. Petersburg, 1846.
- KOHL, J. G. Der Verkehr und die Ansiedelungen der Menschen.
8vo. 602 pp. Leipzig, 1850.
- LANDGREBE, G. Mineralogie der Vulcane.
8vo. 396 pp. Leipzig, 1870.
- Naturgeschichte der Vulcane und der damit in Verbindung stehenden Erscheinungen.
8vo. 2 vols. in one. Gotha, 1855.
- LEONHARD, Karl Cäsar von. Geologie, oder Naturgeschichte der Erde.
5 vols. text; 1 vol. plates. 8vo. Stuttgart, 1836–1844.
- Vulkanen Atlas zur Naturgeschichte der Erde. XV. plates.
- Geologische Atlas zur Naturgeschichte der Erde.
32 pp., XI. plates. 4to. Stuttgart, 1841.
- LUBBOCK, John. The Origin of Civilization, and the Primitive Condition of Man.
12mo. 380 pp. New-York, 1874.
- LYELL, Sir Charles. Elements of Geology.
2 vols. 12mo. Boston, 1841.
- Principles of Geology.
3 vols. 12mo. Boston, 1842.
- The same as above.
8vo. 834 pp. New-York, 1865.
- The same as above. Vol. I.
8vo. 671 pp. New-York, 1872.
- The Geological Evidences of the Antiquity of Man, with an Outline of Glacial and Post-Tertiary Geology, and Remarks on the Origin of Species. Fourth edition.
8vo. 573 pp. London, 1873.

- MARSH, O. C. Ancient Sepulchral Mound near Newark, Ohio.
8vo. 11 pp.
- MATHER, W. W. Notes on Surface Geology. Vol. VII., Pamphlets.
Quarto series. 4to. 47 pp. West Point, N. Y., 1835.
- MICHELL, John. Conjectures concerning the Cause, and Observations upon the Phenomena of Earthquakes.
4to. 36 pp. 1756.
- MILLER, Hugh. The Testimony of the Rocks.
12mo. 454 pp. Edinburgh, 1869.
- MITCHELL, Elisha. Elements of Geology, with an Outline of the Geology of North Carolina.
8vo. 141 pp. 1842.
- MONTICELLI, T., and Covelli N. Der Vesuv.
8vo. 234 pp. Elberfeld, 1824.
- Prodromo della Mineralogia Vesuviana.
8vo. 483 pp. Napoli, 1825.
- MURCHISON, R. J. Siluria.
8vo. 566 pp., XLI plates. London, 1869.
- NEWBERRY, J. S. A Chart of Geological History, prepared for the Students in the School of Mines, Columbia College. Vol. XX., Pamphlets. Octavo series.
- NÖGGERATH, J. Das Erdleben vom Juli 29, 1846.
4to. 60 pp. Bonn, 1847.
- PAGE, David. Hand-Book of Geological Terms and Geology.
12mo. 416 pp. London, 1859.
- PARMELLE, Abbé. Quellenkunde. 16mo. 341 pp. Leipsig, 1856.
- PFAFF, Friederich. Allgemeine Geologie als exacte wissenschafte mit einen anhang Geologische Versuche.
8vo. 318 pp. Leipsig, 1873.
- QUENSTEDT, Friederich Auguste. Klar und Wahr. Neue Reihe populärer Vorträge über Geologie.
8vo. 322 pp. Tübingen, 1872.
- Sonst und Jetzt. Populäre Vorträge über Geologie.
8vo. 288 pp. Tübingen, 1856.
- ROSSMÄSSLER, E. A. Das Wasser. Eine Darstellung für gebildete Leser und Leserinnen.
8vo. 528 pp. Leipsig, 1858.
- SCILLA, A. E. De Corporibus Marinis.
4to. 84 pp. Rome, 1752.
- STEININGER, Johann. Die erloschenen Vulkane in der Eifel und am Niederrhein.
8vo. 223 pp. Mainz, 1820.
- THOMPSON, Thomas. Outlines of Mineralogy, Geology and Mineral Analysis. Seventh edition. 2 vols. 8vo. London, 1836.
- VAN RENSSELAER, Jeremiah. Lectures on Geology.
12mo. 358 pp. New-York, 1825.
- VON COTTA, Bernhard. Die Lehre von den Erzlagerstätten.
8vo. 534 pp. Freiberg, 1855.
- WALTERSHAUSEN, W. Sartorius v. Ueber die submarinen vulkanischen Ausbrüche in der Tertiär-Formation des Val di Noto im Vergleich mit verwandten Erscheinungen Aetna.
12mo. 142 pp. Gottingen, 1846.

ZIGISMONDY, W. Mittheilungen über die Bohrthermen zu Harkann auf der Margaretheninsel nächst Ofen, und zu Lippik und den Bohrbrunnen zu Alesuth. 12mo. 10 pp. Pest, 1873.

See, also, Generalities, p. 298.

Periodical Publications, p. 286.

PETROGRAPHY.

BISCHOF, Gustav. Elements of Chemical and Physical Geology. Translated from the Manuscript of the Author, by B. H. Paul and J. Drummond.

3 vols. 8vo. London, 1854, 1855, 1859.

——— Lehrbuch der Chemischen und Physikalischen Geologie.

3 vols. 8vo. Bonn, 1847, 1854.

——— Lehrbuch der Chemischen und Physikalischen Geologie.

3 vols. 8vo. With Supplemental Volume. Bonn, 1864–1870.

BLUM, J. R. Handbuch der Lithologie oder Gesteinlehre.

8vo. 356 pp. Erlangen, 1860.

BROGNIART, A. Tableaux des Terrains qui Composent L'Ecorce du Globe, on Essai sur la Structure de la Partie Connue de la Terre.

8vo. 435 pp. Paris, 1829.

COQUAND, H. Traité des Roches. 8vo. 423 pp. Paris, 1857.

COTTA, Bernhard von. Die Gesteinlehre.

8vo. 255 pp. Freiberg, 1855.

——— The same.

8vo. 333 pp. Freiberg, 1862.

DANA, J. D. Manual of Geology. Treating of the Principles of the Science with special reference to American Geological History.

8vo. 800 pp. Philadelphia, 1860.

——— Notice of the Chemical and Geological Essays of T. S. Hunt.

8vo. 1874.

DELESSE, M. A. Procédé Mécanique pour déterminer la Composition des Roches.

12mo. 95 pp. Paris, 1866.

D'ORBIGNY, Charles. Description des Roches composant L'Ecorce Terrestre, et des Terrains Cristallins constituant le Sol Primitif. Rédigé d'après la classification, les manuscrits inédits, et les leçons publiques de P. L. A. Cordier.

8vo. 553 pp. Paris, 1868.

FISCHER, H. Chronologischer Ueberblick über die Allwältige Einführung der Mikroskopie, in das studium der Mineralogie, Petrographie u. Paläontologie.

8vo. 80 pp. Freiberg, 1868.

GUMBEL, W. Theodor. The Laurentian Rocks of Bavaria.

Vol. XIII., Pamphlets. Octavo series. 8vo. 24 pp., I. plate, 1866.

HUNT, T. Sterry. Chemical Geology. Replies to the Criticisms of Mr. David Forbes.

Vol. XX., Pamphlets. Octavo series. 8vo. 31 pp. Montreal, 1867.

——— Contributions to Lithology.

Vol. II., Pamphlets. Duodecimo series. 12mo. 51 pp. Montreal, 1864.

——— On Some Points in Chemical Geology.

Vol. XX., Pamphlets. Octavo series. 8vo. 15 pp.

- HUNT, T. Sterry. On the Chemical and Mineralogical Relations of Metamorphic Rocks. Vol. XI., Pamphlets. Octavo series. 8vo. 16 pp. Montreal, 1863.
- On the Chemistry of the Primeval Earth. Vol. XX., Pamphlets. Octavo series. 8vo. 8 pp. 1867.
- On the Theory of Igneous Rocks and Volcanoes. Vol. XX., Pamphlets. Octavo series. 8vo. 8 pp. Montreal, 1858.
- Researches on Gypsums and Magnesian Rocks. Vol. XV., Pamphlets. Octavo series. 8vo. 37 pp.
- JENZSCH, Gustav. Über eine Mikroskopische Flora und Fauna Krystallinischer Maasengesteine. (Eruptivgesteine.) 12mo. Leipzig, 1868.
- LEONHARD, Karl Cäsar von. Charakteristik der Felsarten. 8vo. 772 pp. Heidelberg, 1823.
- Lehrbuch der Geognosie und Geologie. 8vo. 869 pp. Stuttgart, 1835.
- LEVY. Note sur une class de roches éruptives intermediares entre les granites porphyroides et les porphyres. Groupe des Granulites. 8vo. 20 pp. Paris, 1874.
- Notes sur quelques roches analogues aux porphyres granitoides de la Loire. 8vo. 8 pp. Paris, 1873.
- Structure Microscopique des Roches Acides Anciennes. 8vo. 37 pp., II. plates. Paris, 1875.
- NAUMANN, C. F. Lehrbuch der Geognosie. 2 vols. 8vo. Leipzig, 1858.
- PALMIERI and Secchi. Della regione vulcanica del monte Vulture. 4to. 160 pp.
- ROSE, Gustav. Mineralogisch Geognostische Reise nach dem Ural, dem Altai und dem Kierpathische Meere. 2 vols. 8vo. Berlin, 1837–1842.
- ROTH, Justus. Beiträge zur Petrographie der plutonischen Gesteine. 4to. Berlin, 1869.
- Die Gestein Analysen in Tabellirischen Übersicht und mit Kritischen Erläuterungen. Vol. IX., Pamphlets. Quarto series. 4to. 68 pp. Berlin, 1861.
- VOGELSANG, H. Philosophie der Geologie und Mikroskopische Gesteinstudien. 8vo. 229 pp., X. plates. Bonn, 1867.
- VON COTTA, B. Die Gesteinlehre. 8vo. 233 pp. Freiberg, 1862.
- ZIRKEL, Ferdinand. Die Mikroskopische Beschaffenheit der Mineralien und Gesteine. 8vo. 502 pp. Leipzig, 1873.
- Lehrbuch der Petrographie. 2 vols. 8vo. Bonn, 1866.
- Untersuchungen über die Mikroskopische Zusammensetzung und Struktur der Basaltgesteine. 12mo. 208 pp., III. plates. Bonn, 1870.

See, also, Generalities, p. 298.

LOCAL GEOLOGY AND GEOGNOSY.

EUROPE, ASIA AND AUSTRALIA.

- AICHHORN, Sigmund. Geographische Vertheilung des Schiefer, Schicht-und Wasser-Gebirges in Steiermark. Vol. I., Pamphlets. Duodecimo series. 12mo. 14 pp. Gratz, 1856.
- BROGNIART, A. Mémoire sur les Terrains de Sediment Supérieur du Vincentin. 4to. 84 pp. Paris, 1823.
- BRONNE, M. J. Comparaison entre les Terrains Primaires de la Bretagne et Ceux de la Belgique. Vol. XIV., Pamphlets. Octavo series. 8vo. 47 pp.
- CREDNER, Hermann. Versuch einer Bildungsgeschichte der geognostischen Verhältnisse des Thüringer Waldes. Vol. XX., Pamphlets. Octavo series. 2 vols., text and plates. Gotha, 1855.
- DELESSE, A. Les Oscillations des Côtes de France. Vol. XIII., Pamphlets. Octavo series. 8vo. 12 pp. Paris, 1872.
- DESCRIPTION Géologique de la Partie du Sud des Montagnes de l'Ural. St. Petersburg, 1858.
- DEWALQUE, G. Description du Lias de la Province de Luxembourg. *Inaugural Dissertation*. Vol. XV., Pamphlets. Octavo series. 8vo. 64 pp. Liège, 1857.
- Rapport sur les Observations sur le terrain silurien de l'Ardenne par MM. Gosselet et C. Malaise. 8vo. 6 pp. 1868.
- Rapport sur un memoire envoyé au concours de la classe des sciences de 1874, en réponse à la question suivante: Faire connaitre, notamment au point de vue de leur composition, les roches plutoniennes, ou considérées comme telles de la Belgique et de l'Ardenne française. 8vo. 26 pp. Paris, 1874.
- Sur la Correlation des Formations Cambriennes de la Belgique et du Pays des Galles. 8vo. 4 pp. 1874.
- D'HALLOY, J. J. D'O. Coup D'Œil sur la Geologie de la Belgique. 8vo. 132 pp. Brussels, 1842.
- Mémoires pour servir à la Description Géologique des Pays-Bas, de la France et de Quelques Contrés Voisines. 12mo. 308 pp., II. Maps. Namur, 1828.
- DUMMONT, Andre. Carte Géologique de la Belgique indiquant les Terrains qui se Trouve au-dessous du Limon Hesbayen et du Sable Campinien. Atlas, IX. plates.
- DUMONT, A. H. Mémoire sur les Terrains Triassiques et Jarassiques de Luxembourg. Vol. VII., Pamphlets. Quarto series. 4to. 36 pp. 1841.
- ENGLEHARDT, Moritz von. Geognostischer Umriss von Finland. Folio. 44 pp. Berlin, 1820.

- FAVRE, Ernest. *Étude sur la Geologie des Alpes*. Vol. XII., Pamphlets. Octavo series. 8vo. 48 pp., II. plates. Geneva, 1870.
- FITTON, W. H. *A Geological Sketch of the Vicinity of Hastings*. 16mo. 94 pp. London, 1833.
- *An Account of some Geological Specimens from the Coast of Australia*. 8vo. 64 pp. London, 1826.
- *Observations on some of the Strata below the Chalk, between the Chalk and Oxford Oolite, in the Southeast of England*. 4to. 400 pp. London, 1836.
- GALLEOTTE, H. *Mémoire sur la Constitution Geognostique de la Province de Brabant*. 4to. 167 pp.
- GEOLOGISCHE Karte von dem Niederschlesischen Gebirge Breslau, Glatz, Hirschberg, Liegnitz, Löwenberg, Reinerz, Strehlen, Waldenberg. 9 Charts.
- *Karte von Preussen und den Thüringischen Staaten*. Charts IV. and V., and 10 descriptive pamphlets. Berlin, 1873.
- GEOLOGISCHEN Specialkarte von Preussen, &c.
- *Abhandlungen zur Geologischen specialkarte von Preussen und den Thüringischen Staaten*. Band I. heft 2. 8vo. 75 pp., I. plate. Berlin, 1874.
- *Erläuterungen zur geologischen Specialkarte von Preussen und den Thüringischen Staaten*. Blätter Cölleda, Erfurt, Neumark, Petersburg, Grobzig, Sommerda, Stotternheim, Weimar, Zorbis. 9 Pamphlets. Berlin, 1874.
- GOSSELET et Malaise. *Observations sur le terrain silurien de l'Ardenne*. 8vo. 17 pp. 1868.
- GUMBEL, W. Theodor. *The Laurentian Rocks of Bavaria*. Vol. XIII., Pamphlets. Octavo series. 8vo. 24 pp., I. plate. 1866.
- HANNAH, Richard. *A Succinct Account of the Lime Rocks of Plymouth*. 8vo. 71 pp., XI. plates. Plymouth.
- HARTUNG, George. *Die Azoren in ihrer Ausseren Erscheinung und nach ihrer Geognostischen Natur*. Mit Beschreibung der Fossilen Reste von H. G. Brown. 8vo. 350 pp. text; Atlas, XIX. plates, I. map. Leipsig, 1860.
- HAUSMANN, J. F. L. *Ueber den gegenwärtigen Zustand und die Wichtigkeit des Hannoverschen Harzes*. 8vo. 411 pp. Gottingen, 1832.
- HEER, Oswald. *Die Urwelt der Schweiz*. 8vo. 622 pp. Zurich, 1865.
- HERBICH, Franz. *Zur Verbreitung der Eruptivgesteine Siebenbürgens*. 16mo. 20 pp. Klausenburg, 1873.
- HISTOIRE Naturelle de Jura et des Departments Voisins. Tome I. Ogerien, Le Frere. Deuxième Fascicule. *Geologie Preparent Dite Appliquée aux Arts, a L'Industrie et surtout a L'Agriculture*. 8vo. Paris, 1864.
- JOHNSTRUP, F. *Om Kullagene paa Færoerne samt Analyser af de i Danmark og de nordlige Bilande forkommende Kul*. 12mo. 44 pp. Copenhagen, 1873.

- JOHNSTRUP, F. Sur les Couches Carbonifères des îles Fœroë et les analyses des charbons du Danemark et des possessions danoises dans le Nord. 12mo. 4 pp., I. plate. Copenhagen, 1873.
- JUKES, J. B. Report upon the Geological Survey of Great Britain. 8vo. 241 pp. London, 1859.
- KEFERSTEIN, Christian. Geognostische Bemerkungen über die basaltischen Gebilde des westlichen Deutschlands. 8vo. 207 pp. Halle, 1820.
- KOCH, C. L., and Dunker, W. Beiträge zur Kenntniss der nord-deutschen Oolithgebirges und dessen Versteinerung. 8vo. 64 pp. Brunswick, 1837.
- LALANNE, Leon. Sur les terrains d'une partie de la vallée du Donetz. Vol. XIV., Pamphlets. Octavo series. 8vo. 17 pp., I. plate. 1839.
- LARIVIÈRE, A. E. Description Geognostique du Grand Duché de Luxembourg. 4to. 157 pp. Brussels, 1828.
- LOTTNER, F. H. Geognostische Skizze des Westphälischen Steinkohlen Gebirges. 8vo. 162 pp. Iserlohn, 1868.
- LUDWIG, Rudolph A. B. S. Ueber das rheinische Schiefergebirge. Vol. II., Pamphlets. Octavo series. 12mo. 40 pp., I. map. 1853.
- MAYER, Karl. Systematisches Verzeichniss der Versteinerungen des Helvetien der Schweiz und Schwabens. Vol. VII., Pamphlets. Quarto series. 4to. 35 pp. Zurich, 1842.
- MEGLITZKI and Antipoff. Second Geognostical Description of the Southern portion of the Ural Chain, as explored in 1854 and 1855. (In Russian.) 8vo. 435 pp., text; and a volume of Maps. St. Petersburg, 1858.
- MUNROE, Henry S. Geological Survey of Hokkaido, Japan. The Gold Fields of Yesso. 12mo. 80 pp. Tokyo, 1875.
- Yesso Coals. 12mo. 39 pp. Tokyo, 1874.
- MURCHISON, R. J.; Verneuil, E. de, and von Keyserling, Alexander. The Geology of Russia in Europe and the Ural Mountains. Vol. I. Geology. 700 pp., VII. plates. 4to. London, 1845.
- PHILLIPS, John. Geology of Yorkshire. Part I. The Yorkshire Coast. 184 pp., XXIV. plates. Part II. The Mountain Limestone District. 253 pp., XXV. plates. 2 vols. 4to. London, 1835, 1836.
- RAMSAY, Andrew C.; Bristow, H. W.; Geikel, A., and Bauermann, H. A Descriptive Catalogue of the Rock Specimens in the Museum of Practical Geology, with Explanatory Notices of their Nature and Mode of Occurrence in Place. Third edition, revised and partly re-written. 12mo. 291 pp. London, 1862.
- ROEMER, Ferd. Geognostische Karte von Ober-Schlesien und den Angrenzenden Gebieten. Sectionen Brieg, Kreutzberg, Gleiwitz, Guttentag, Königshütte, Leobschütz, Loslau, Namslau, Pless-Troppan, Woischnick. 12 Charts.

- ROMANOWSKY. Un Aperçu des travaux géognostiques faites dans le bassin moyen des couches Carbonifères de Russie.
8vo. 18 pp. St. Petersburg, 1863.
- SANDBERGER, Fridolin. Untersuchungen über das Mainzer Tertiärbecken und dessen Stellung im Geologischen systeme. Vol. XXI., Pamphlets. Octavo series. 8vo. 91 pp. Wiesbaden, 1853.
- SARTORIUS, v. Waltershausen, W. Ueber die Vulkanischen Gesteine in Sicilien und Island und ihre submarine Anbildung.
8vo. 532 pp. Gottingen, 1853.
- SHARPE, D. Fossiles du Portugal. Vol. XXII., Pamphlets. Octavo series. 8vo., X. plates. 1850.
- SMITH, J. Lawrence. On Some of the Thermal Waters of Asia Minor. Vol. XXIX., Pamphlets. Octavo series. 8vo. 20 pp. 1851.
- SMYTH, R. B. The Gold Fields and Mineral Districts of Victoria.
8vo. 644 pp. Melbourne, 1869.
- STUDER, B. Geologie der Schweiz. 2 vols. 12mo. Bern, 1853.
——— Geologie der Westlichen Schweizer-Alpen.
8vo. 420 pp., text; 4to. IV. plates. Leipzig, 1834.
- STUR, Dionys. Geologie der Steiermark. 8vo. 650 pp. Graz, 1871.
- TORELL, Otto. Om de Geoliska forskningarne i Norge. Vol. VII, Pamphlets. Quarto series. 4to. 20 pp.
- ULRICH, G. H. F. Notes and Observations on the Nuggetty Reef, Maldon. (Quarter sheet, 14 N. W.) *Geological Survey of Victoria*. Vol. XXIII., Pamphlets. Octavo series.
8vo. 9 pp., I. plate. Melbourne.
- VAN DEN BINKHORST, J. T. B. Conches cretacées du Limbourg. Première Partie. 8vo. 276 pp. Maastrich, 1859.
- VILLERS, B. de, Dufrénoy, P. A., and Beaumont, Elie de. Carte Geologique de la France avec Explication.
2 vols. 4to. Paris, 1841.
- VON COTTA, Bernhard. Erzlagerstätten im Banat und im Serbien.
8vo. 108 pp. Vienna, 1865.
- VON HUMBOLDT, A. Essai Géognostique sur les Gissement des Roches dans les deux Hémisphères.
8vo. 379 pp. Paris, 1823.
- WALLACE, William. The Laws which regulate the Deposition of Lead Ore in Veins, illustrated by an examination of the Geological Structure of the Mining Districts of the Alston Moor.
8vo. 258 pp. London, 1861.
- WALTERSHAUSEN, W. Sartorius v. Ueber die submarinen vulkanischen Ausbrüche in der Tertiär-Formation des Val di Noto im Vergleich mit verwandten Erscheinungen Aetna.
12mo. 142 pp. Gottingen, 1846.
- YERMOLOW, Al. S. Recherches sur les Gissements de Phosphate de Chaux Fossile en Russie avec Tableaux analytiques et Cartes.
8vo. St. Petersburg, 1873.

BRITISH AMERICA, MEXICO, CENTRAL AMERICA AND SOUTH AMERICA.

- CATALOGUE Descriptive des Collections exposées par la Commission
Geologique du Canada. 8vo. 72 pp. Paris, 1867.
- Officiel des Exposants Récompensés par le Jury Interna-
tional. 8vo. 455 pp. Paris.
- ESCHWEGE, W. L. v. Beiträge zur Gebirgskunde Brasiliens.
2 vols., text and plates. Berlin, 1832.
- Pluto Braziliensis. 2 vols., text and plates. Berlin, 1833.
- FEUCHTWANGER, Lewis. Report on Frye's Island, (also called
L'Etang Island,) N. W. shore of the Bay of Fundy. vol. XXIV.,
Pamphlets. Octavo series. 8vo. 14 pp. New-York, 1866.
- GEOLOGICAL Survey of Canada. Logan, W. E., Director.
Annual Report of Progress for the years 1844, 1848, 1849,
1850, 1851, 1852.
6 Pamphlets. 8vo. Montreal, 1845-1853.
- Report of Progress for the year 1857.
8vo. 240 pp. Toronto, 1858.
- Report of Progress for the year 1858.
8vo. 263 pp. Montreal, 1859.
- Report of Progress from its Commencement to 1863.
8vo. 983 pp. 4to., maps and sections. Montreal, 1863.
- Report of Progress from 1863 to 1866.
8vo. 321 pp. Ottawa, 1866.
- Selwyn, A. R. C., Director.
A List of the Publications of the Survey.
8vo. 7 pp. Montreal, 1873.
- Report of Progress from 1866 to 1869.
8vo. 475 pp., V. maps. Montreal, 1870.
- Report of Progress for 1870-1871.
8vo. 351 pp. Ottawa, 1872.
- Report of Progress for 1871-1872.
8vo. 154 pp. Montreal, 1872.
- Report of Progress for 1872-1873.
8vo. 300 pp. Montreal, 1873.
- Report of Progress for 1873-1874.
8vo. 268 pp., I. plate. Montreal, 1874.
- of Great Britain. The Iron Ores of Great Britain.
Part I. The Iron Ores of the North and North Midland
Counties of England. 8vo. 97 pp. London, 1856.
Part II. The Iron Ores of South Staffordshire.
8vo. 164 pp. London, 1858.
- of Victoria. 45 sheets of Maps. Melbourne.
- GEROLT, F. v. Cartes Geognostiques de Mexique.
4to. 16 pp., VII. plates. Dusseldorf, 1827.
- V. von, and Berghes, Carl de. Geognostische Karte der
Vorzüglichsten Bergwerkes-Districte des States von Mex-
ico. 4to. 16 pp., VI. charts. Dusseldorf, 1872.

- HARTT, Ch. F. Contributions to the Geology and Physical Geography of the Lower Amazons. The Erere-Monte-Alegro District of the Table-Topped Hills. 8vo. 8 pp. Buffalo, 1874.
- HUNT, T. Sterry. Esquisse Géologique du Canada suivie d'un Catalogue Descriptif de la Collection de Cartes et Coupes géologiques, Livres imprimés; Roches, Fossiles et Minéraux économiques envoyée à l'Exposition de 1867.
8vo. 72 pp. Paris, 1867.
- Note sur Les Sources Acides et les Gypses du Haut Canada. Vol. VII., Pamphlets. Quarto series. 4to. 4 pp. 1855.
- Report on the Gold Region of the County of Hastings. *Geol. Survey of Canada.* Vol. III., Pamphlets. Octavo series.
8vo. 11 pp. Montreal, 1867.
- Report on the Gold Region of Nova Scotia. *Geol. Survey of Canada.* Vol. III., Pamphlets. Octavo series.
8vo. 48 pp. Ottawa, 1868.
- MARCOU, Jules. Geological Map of the United States and British Provinces, N. A. 8vo. 92 pp., VIII. plates. Boston, 1853.
- MARSH, O. C. Catalogue of Official Reports upon Geological Surveys of the United States and British Provinces.
8vo. 14 pp. 1867.
- Catalogue of the Mineral Localities in New-Brunswick, Nova Scotia and Newfoundland. 8vo. 8 pp. 1863.
- The Gold of Nova Scotia.
8vo. 7 pp. New-Haven, 1861.
- SAWKINS, J. G. Reports on the Geological Survey of Jamaica.
8vo. 339 pp. London, 1869.
- See, also, Periodical Publications, p. 286.*

THE UNITED STATES AND TERRITORIES.

- ADAMS, C. B. First, Second, Third and Fourth Annual Reports of the Geology of Vermont.
4 Pamphlets in one vol. 8vo. Burlington, 1845.
- BOOTH, J. C. Memoir of the Geological Survey of Delaware.
8vo. 188 pp. Dover, 1841.
- BROADHEAD, G. C. Report of the Geological Survey of the State of Missouri, including Field work of 1873-1874, with illustrations and an Atlas. 2 vols. Jefferson City, 1874.
- Reports on the Geological Survey of the State of Missouri, 1855-1871. 8vo. 323 pp. Jefferson City, 1873.
- Preliminary Report on the Iron Ores and Coal Fields, from the Field work of 1872.
Text, 8vo., 441 pp.; Atlas, XIII. plates. New-York, 1873.
- BROOKS, T. B. Reports of the Geological Survey of Michigan for the years 1869-1873. The Upper Peninsula.
Text, 2 vols. imp. 8vo.; Atlas, XXIII. plates. New-York, 1873.

- COLVIN, Verplanck. Report on a Topographical Survey of the Adirondack Wilderness of New-York.
8vo. 43 pp., with a map. Albany, 1873.
- COOK, G. H. Geological Survey of the State of New-Jersey. Annual Report of the State Geologist for the year 1869.
8vo. 57 pp. Trenton, 1870.
- Annual Report of the State Geologist for the year 1870.
8vo. 67 pp. New-Brunswick, 1871.
- Annual Report of the State Geologist for the year 1874.
8vo. 115 pp. Trenton, 1874.
- Report on the Geology of New-Jersey.
4to. 900 pp. Newark, 1868.
- COX, E. T. First Annual Report of the Geological Survey of Indiana. 8vo. 240 pp., with vol. of Maps. Indianapolis, 1869.
- Second Annual Report of the Geological Survey of Indiana, made during the year 1870.
8vo. 303 pp. Indianapolis, 1871.
- COZZENS, Isacchar. The Geological History of Manhattan Island.
8vo. 114 pp. New-York, 1843.
- CREDNER, Hermann. Geognosticher Aphorismen aus Nord-Amerika.
8vo. 13 pp., I. plate. Leipsig, 1870.
- DANA, J. D. Manual of Geology. Treating of the Principles of Science, with special reference to American Geological History.
8vo. 800 pp. Philadelphia, 1860.
- Whitney's Geology of California. 8vo. 18 pp.
- DAWSON, J. W. Acadian Geology. 8vo. 384 pp. London, 1855.
- Acadian Geology. The Geological Structure; Organic Remains and Mineral Resources of Nova-Scotia, New-Brunswick and Prince Edward's Island.
8vo. 694 pp. London, 1868.
- EATON, Amos. Index to the Geology of the Northern States; to which is prefixed a Geological Grammar. Second edition.
12mo. 286 pp. Troy, 1820.
- EMMONS, Ebenezer. The Geology of the Eastern Counties of North Carolina. 8vo. 314 pp. Raleigh, 1858.
- The Geology of the Midland Counties of North Carolina.
8vo. 351 pp. New-York, 1856.
- FOSTER, J. W., and Whitney, J. D. Reports on the Geology and Topography of a portion of the Lake Superior Land District.
Part I. The Copper Lands. 8vo. 224 pp., IV. Maps. 1850.
Part II. The Iron Regions and General Geology. 406 pp., XXXIV. plates. 1851. 2 vols. 8vo. Washington.
- FREMONT, J. C. Report of the Exploring Expedition to the Rocky Mountains in the year 1842, and to Oregon and North California in the years 1843-1844.
8vo. 693 pp. Washington, 1845.
- HALL, James, and Whitney, J. D. Report on the Geological Survey of the State of Iowa, embracing the Results of Investigations made during portions of the years 1855, 1856 and 1857. Vol. I., Part I. Geology. 4to. 1858.

- HALL, James, and Whitney, J. D. Report on the Geological Survey of the State of Wisconsin. 2 vols. 4to. 1862.
- HILGARD, E. W. The Geology and Agriculture of the State of Mississippi. 8vo. 388 pp. Jackson, Miss., 1860.
- HITCHCOCK, C. H. First Annual Report upon the Geology and Mineralogy of New-Hampshire. 8vo. 36 pp. Manchester, 1869.
- Report of the Geological Survey of the State of New-Hampshire in 1870. 8vo. 32 pp. Nashua, 1871.
- Report on the Geological Survey of New-Hampshire. Showing its progress during the year 1871. Vol. XIII., Pamphlets. Octavo series. 8vo. 56 pp., 1 map. Nashua, 1872.
- HITCHCOCK, Edward. Report on the Geology, Mineralogy, Botany and Zoology of Massachusetts. Part II. Topographical Geology. Part III. Scientific Geology. 8vo. Amherst, 1832.
- Geology of Massachusetts. Vol. II. Scientific and Elementary Geology. 4to. Amherst and Northampton, 1841.
- Final Report on the Geology of Massachusetts. 4to. 299 pp., XIV. plates. Amherst, 1841.
- Plates Illustrating the Geology and Scenery of Massachusetts. 4to. XIX. plates. 1833.
- Outline of the Geology of the Globe, and of the United States in Particular. 12mo. 136 pp. Boston, 1856.
- HITCHCOCK, Edward, assisted by Hitchcock, Edward, Jr., and Charles H.; and Hager, Albert D. Report on the Geology of Vermont, Descriptive, Theoretical, Economical and Scenographical. Vol. I. Hitchcock, Edward. Preliminary Report, General Principles of Geology, Metamorphism of Rocks, Classification of Rocks. Part 1. Alluvial and Tertiary Rocks. Part 2. Hitchcock, Edward. Hypozoic and Palæozoic Rocks. Part 3. Hitchcock, C. H. Azoic Rocks.
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- HOLMES, E., and Hitchcock, C. H. Second Annual Report upon the Natural History and Geology of the State of Maine. 8vo. 447 pp. 1862.

- HOLMES, F. S. The Phosphate Rocks of South Carolina and the Great Carolina Marl Bed. 8vo. 87 pp. Charleston, S. C., 1860.
- JACKSON, C. T. Atlas Illustrating the First Report upon the Geology of the State of Maine. XXIV. plates. 4to. ——— Second Annual Report on the Geology of the Public Lands belonging to the two States of Maine and Massachusetts. 8vo. 137 pp. Augusta, Me., 1838.
- Third Annual Report on the Geology of the State of Maine. 8vo. 330 pp. Augusta, Me., 1839.
- Final Report on the Geological and Agricultural Survey of the State of Rhode Island, 1839. 8vo. 312 pp. Providence, 1840.
- KERR, W. C. Report of the Progress of the Geological Survey of North Carolina, 1866. 8vo. 56 pp. Raleigh, 1867.
- KITCHELL, William. Second Annual Report on the Geological Survey of the State of New-Jersey for 1855. 8vo. 248 pp. Trenton, 1856.
- LIEBER, O. M. Geological Survey of South Carolina. First and Second Annual Reports for 1856 and 1857. 8vo. 133, 45 pp., XIII. plates. Charleston, S. C., 1858.
- LITTLE, George. Report of Progress of the Mineralogical, Geological and Physical Survey of the State of Georgia, for the period from September 1st to December 31st, 1874. 8vo. 36 pp. Milledgeville, 1875.
- MARCOU, Jules. Geological Map of the United States and the British Provinces, N. A. 8vo. 92 pp., VIII. plates. Boston, 1853.
- MARCY, R. B. Explorations of the Red River of Louisiana in the year 1852. 8vo. 320 pp., II. maps. Washington, 1853.
- MARSH, O. C. Catalogue of Official Reports upon Geological Surveys of the United States and British Provinces. 8vo. 8 pp. 1863.
- MATHER, W. W. Second Annual Report of the State Geological Survey of Ohio. 12mo. 386 pp. Columbus, 1838.
- MEEK, F. B. A Reply to Prof. Swallow on Certain Disputed Points in the Geology of Kansas and other North Western Localities. 8vo. 9 pp. Springfield, 1869.
- MITCHELL, Elisha. Elements of Geology, with an Outline of the Geology of North Carolina. 8vo. 14 pp. 1842.
- NATURAL History of the State of New-York.
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Vol. 1. Mather, W. W. Survey of the First Geological District, embracing twenty-one Counties, extending from the north end of Washington County, between Lakes Champlain and George, southwestwardly to the Susquehanna River, and including all east and south of this District that lies within the limits of the State. 653 pp., XLVI. plates, 2 charts. 1842.

NATURAL History of the State of New-York.

Vol. 2. Emmons, Ebenezer. Survey of the Second Geological District, comprising the Counties of Warren, Essex, Clinton, Franklin, St. Lawrence, Jefferson and Hamilton. 427 pp., XVII. plates. 1842.

Vol. 3. Vanuxem, Lardner. Survey of the Third Geological District, comprising the Counties of Montgomery, Fulton, Otsego, Herkimer, Oneida, Lewis, Oswego, Madison, Onondaga, Cayuga, Cortland, Chenango, Broome, Tioga, and the eastern half of Tompkins. 306 pp. 1842.

Vol. 4. Hall, James. Survey of the Fourth Geological District, comprising the Counties of Wayne, Monroe, Orleans, Niagara, Seneca, Ontario, Yates, Livingston, Genesee, Erie, the western part of Tompkins, Chemung, Steuben, Alleghany, Cattaraugus and Chataouque. 683 pp., XIX. plates, 2 charts. 1843. 4 vols. 4to. 1842, 1843.

NEWBERRY, J. S. Notes on the Surface Geology of the Basin of the Great Lakes. 8vo. 7 pp. Boston, 1862.

—— The Geological Survey of Ohio.

Part 1. Report of Progress in 1869, by J. S. Newberry.

Part 2. Report of Progress in the Second District, by E. B. Andrews.

Part 3. Report on the Geology of Montgomery County.

8vo. 164 pp. Columbus, 1870.

—— Report of Progress in 1870. 8vo. 568 pp. Columbus, 1871.

—— Final Report. Vol. I. Geology and Palæontology.

Part 1. Geology. 680 pp.

—— The Surface Geology of Ohio. Reprinted from Geological Survey of Ohio. Vol. II. 8vo. Columbus, 1874.

OWEN, David Dale. Geological Reconnaissance of Middle and Southern Arkansas, made in 1859 and in 1860.

8vo. 433 pp. Philadelphia, 1860.

—— Report of a Geological Reconnaissance of the State of Indiana, made in 1837. 8vo. 69 pp. Indianapolis, 1869.

—— Report of a Geological Survey of Wisconsin, Iowa and Minnesota. 2 vols. 4to. text and plates. Philadelphia, 1852.

—— Third Report on the Geological Survey of Kentucky, 1856, 1857. 4to. 589 pp. Frankfort, Ky., 1857.

—— Robert, Peter, and Sydney, Lyon S., and others. Report of the Geological Survey of the State of Kentucky, made during the years 1854 to 1859. 4 vols. 8vo. Frankfort, 1856-1861.

—— W. Elderhorst, and Cox, E. T. First and Second Reports of a Geological Reconnaissance of Northern Arkansas, during 1857 and 1858. 8vo. 256, 433 pp. Little Rock, 1858-1860.

—— Richard. Report of a Geological Reconnaissance of Indiana. 8vo. 368 pp. Indianapolis, 1862.

REPORTS on the Geological Survey of the State of Missouri. Raphael Pumpelly, Director.

Vol. I. Unpublished Material of Previous Surveys, 1855-1871. Collected by G. C. Broadhead, F. B. Meeks and B. F. Shumard. 8vo. 323 pp. Jefferson City, 1873.

- ROGERS, H. D. Description of the Geology of the State of New-Jersey, being a Final Report.
8vo. 301 pp. Philadelphia, 1840.
- Second, Third, Fourth, Fifth and Sixth Annual Reports of the State Geologist of the State of Pennsylvania.
8vo. Harrisburg, 1838–1842.
- The Geology of Pennsylvania.
2 vols. 4to. 586, 1045 pp. Philadelphia, 1858.
- SAFFORD, James M. First and Second Biennial Reports on the Geology of the State of Tennessee, made to the Thirty-first and Thirty-second General Assemblies.
8vo. 164, 11 pp. Nashville, 1856, 1857.
- Geology of Tennessee. 8vo. 550 pp. Nashville, 1869.
- SWALLOW, G. C. First and Second Annual Reports of the Geological Survey of Missouri. 8vo. 446 pp. Jefferson City, 1855.
- TROOST, Gerard. Fifth, Eighth and Ninth Geological Reports to the Twenty-third, Twenty-sixth and Twenty-seventh General Assemblies of Tennessee. 8vo. 76, 20, 39 pp. Nashville, 1840.
- TUOMEY, M. Reports on the Geology of South Carolina.
4to. 293 pp. Columbus, S. C., 1848.
- Second Biennial Report on the Geology of Alabama.
8vo. 292 pp. Montgomery, Ala., 1858.
- TYSON, P. T. First Report to the House of Delegates of Maryland, with Appendix on the Mineral Resources of Maryland.
8vo. 145, 20 pp. Annapolis, 1860.
- UNITED STATES and Mexico Boundary Survey, under Major W. H. Emory, Commissioner.
Part I., Subdivision 1. General Description of the Country, &c., by W. H. Emory.
Subdivision 2. Geological Reports by Dr. H. C. Parry and Arthur Schott. Notes by W. H. Emory. Palæontology and Geology of the Boundary by James Hall. Description of Cretaceous and Tertiary Fossils by T. A. Conrad.
4to. Washington, 1859.
- UNITED STATES Geological Survey of the Territories. Hayden, F. V., Director. Preliminary Reports. Octavo series.
Preliminary Field Report of the Survey of Colorado and New-Mexico. 8vo. 155 pp. Washington, 1869.
Preliminary Report of the Survey of Montana and portions of Adjacent Territories. 8vo. 538 pp. Washington, 1872.
Preliminary Report of the Survey of Wyoming and portions of Contiguous Territories.
8vo. 511 pp. Washington, 1872.
First, Second and Third Annual Reports, for the years 1867, 1868 and 1869. 8vo. 261 pp. Washington, 1873.
Final Report on Nebraska and portions of the Adjacent Territories. 8vo. 264 pp., XI. plates. Washington, 1872.
Sixth Annual Report, embracing portions of Montana, Idaho, Wyoming and Utah; being a Report of Progress of the Explorations for the year 1872.
8vo. 844 pp. Washington, 1873.

- WHITE, C. First and Second Annual Reports of the State Geologist of Iowa. 8vo. 279 pp. Des Moines, 1868.
- WHITNEY, J. D. The Geological Survey of the State of California. J. D. Whitney, Director. An Address to the Legislature of California, concerning the Geological Survey of the State, delivered March 12th, 1861. Vol. XIV., Pamphlets. Octavo series. 8vo. 47 pp. San Francisco, 1861.
- An Address on the Propriety of Continuing the State Geological Survey of California; to which are appended, Two Letters, relative to the Progress of the Survey during the years 1864-1865, and 1865-1866; also, the Report of the Commissioners to Manage the Yosemite Valley and the Mariposa Big Tree Grove, for the years 1867-1868. 8vo. 23, 14, 15, 14 pp. San Francisco, 1868.
- Letter of the State Geologist relative to the Progress of the State Geological Survey of California during the years 1866-1867. 8vo. 15 pp. Sacramento, 1867.
- The Geological Survey of the State of California. Reports of the Survey. Geology. Vol. I. Report of Progress and Synopsis of Field Work, from 1860 to 1864. 4to. 498 pp. 1865.
- WINCHELL, A. First Biennial Report of the Geological Survey of Michigan. 8vo. 339 pp. Lansing, 1861.
- N. H. Geological and Natural History Survey of Minnesota. Appendix to Regents' Report of University of Minnesota. 8vo. 148 pp. St. Paul, 1873.
- WOLTERS, A. Das Territorium Idaho und Seine Mineralschatze. 8vo. 8 pp. Vienna, 1873.
- WORTHEN, A. H., assisted by J. D. Whitney, Leo Lesquereux and Henry Engelmann. The Geological Survey of Illinois. Vol. I. Geology. Vol. III. Geology and Palæontology. 2 vols. 4to. Chicago, 1866-1868.

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- GENERALITIES.—Credner, H. ; Dana, J. D. ; Eaton, A. . Marcon, Jules ; Marsh, O. C.

PALÆONTOLOGY.

- AGASSIZ, Louis. Études Critiques sur les Mollusques Fossiles. Les Myes du Jura et de la Craie Suisse. 4to. 287 pp., XCIV. plates. Neuchatel, 1842.
- Études Critiques sur les Mollusques Fossiles du Jura et de la Craie Suisse. Les Trigones. 4to. 58 pp., XI. plates. Neuchatel, 1842.
- Iconographie des Coquilles Tertiaires. 4to. 64 pp., XVI. plates. Neuchatel, 1845.
- Mémoire sur les Moules de Mollusques vivans et fossiles. Acephales Vivans. 4to. 48 pp., IX. plates. Neuchatel, 1839.
- Monographié D'Echinodermes vivans et fossiles. Echinites. Famille des Cidarides. Première Monographie—Des Salénies. 32 pp., V. plates.
- Famille des Clypeastroides. Seconde Monographie—Des Scutelles. 161 pp., XXVII. plates.
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- Quatrième Monographie—Des Dysasters, par Ed. Desor. 29 pp., IV. plates.
- Monographie des Poissons Fossiles du Vieux Gres Rouge ou Systeme Dévonien (Old Red Sandstone) des Iles Britanniques et de Russie. Text, troisième livraison. 171 pp. 4to. Atlas, livraisons 1, 2, 3, XLIII. plates. Neuchatel, 1844–1845.
- Nomenclator Zoologicus continens Nomina Systematicà Generum Animalium tam Viventium quam Fossilium. 3 vols. 4to. Soloduri, 1842–1847.
- Recherches sur les Poissons Fossiles. 5 vols. 4to. text; 5 vols. plates. Neuchatel, 1833–1843.
- The Primitive Diversity and Number of Animals in Geological Times. 8vo. 16 pp. New-Haven, 1854.
- BARRANDE, Joachim. Céphalopodes Siluriens de la Bohême. Introduction. 8vo. 48 pp. Paris, 1867.
- Crustacés Divers et Poissons des Dépôts Siluriens de la Bohême. 8vo. 127 pp. Paris, 1872.
- Ptéropodes Siluriens de la Bohême. Introduction. 16 pp. Paris, 1867.
- I. Rapparition du Genre *Arethusina* Barr. II. Faune Silurien des Environs de Hoff, en Bavière.
- BEINERT and Göppert. Abhandlungen über die Beschaffenheit und Verhältnisse der fossilen Flora. 4to. 72 pp. 1849.
- BELL, T., Prof. A Monograph of the Fossil Malacostracous Crustacea of Great Britain. 4to. 84 pp., XXII. plates. London, 1857–1858.

- BINKHORST, J. T. B. van den. *Esquisse Géologique et Paleontologique des Couches Cretacées du Limbourg et plus spécialement de la Craie Tuffeau.* 8vo. 268 pp., VI. plates. 1859.
- BINNEY, E. W. *Observations on the Structure of Fossil Plants found in the Carboniferous Strata.* 4to. 44 pp., XII. plates. London, 1872.
- BLAINVILLE, H. D. de. *Mémoire sur les Belemnites.* 4to. 135 pp., V. plates. Paris, 1827.
- BRONN, H. G. *Index Paleontologicus.* 3 vols. 8vo. Stuttgart, 1848.
- BUSK, George. *A Monograph of The Fossil Polyzoa of the Crag.* 136 pp., XXII. plates. London, 1857.
- CLARK, T. E. *Fichtelit. A fossil Carbo-Hydrogen, found in the Fichtelgebirge of North-Bavaria. Inaugural Dissertation.* 8vo. 32 pp. Heidelberg, 1857.
- CONRAD, T. A., and Meek, F. B. *Check Lists of the Invertebrate Fossils of North America.* 8vo. 112 pp. Washington, 1866.
- COPE, E. D. *Synopsis of New Vertebrata from the Tertiary of Colorado, during the Summer of 1873.* 8vo. 19 pp. Washington, 1873.
- COTTEAN, Gustav. *Études sur les Mollusques Fossiles de Lyonne.* 3 livraisons, (as far as pub.) 8vo. 141 pp. Paris, 1853-1857.
- CUVIER, G. *Recherches sur les Ossements Fossiles.* Fourth edition. 10 vols. 8vo. text. 2 vols. plates. Paris, 1834-1836.
- D'ARCHIAC, Le Vicomte. *Rapport sur les Fossiles du Tourtia.* 4to. 60 pp. 1846.
- DARWIN, Charles. *A Monograph on the Fossil Balanidæ and Verrucidæ of Great Britain.* 180 pp., XXIII. plates. 1854.
- *A Monogram on The Fossil Lepadidæ, or Pedunculated Cirripedes of Great Britain.* 88 pp., V. plates. 1851.
- DAVIDSON, T. *A Monograph of British Carboniferous Brachiopoda.* 3 vols. 4to. 1851-1871.
- DAWKINS, W. Boyd, and Sanford, W. Ayshford. *The British Pleistocene Mammalia.* Parts I., III., IV., V. 218 pp., XIII. plates. London, 1868-1871.
- *The British Pleistocene Ovidæ.* 30 pp., V. plates. London, 1864-1872.
- DAWSON, J. W. *On the Structure of certain Organic Remains in the Laurentian Limestones of Canada, with an additional note by W. B. Carpenter.* 8vo. 14 pp., II. plates. 1864.
- D'ORBIGNY, Alcide. *Cours Élémentaire de Paleontologie et de Geologie Stratigraphique.* 3 vols. 12mo. text; 1 vol. 4to. plates. Paris, 1849-1852.
- *Prodrome de Paleontologie.* 3 vols. 12mo. Paris, 1850-1852.
- DEANE, James. *Ichnographs from the Sandstone of Connecticut River.* 4to. 61 pp., XLVI. plates. Boston, 1861.
- DUNCAN, Dr. *Supplement to the Fossil Corals.* Parts I., II., IV. 190 pp., XXXVI. plates. London, 1865-1868.

- DUNKER, Willh. von Meyer, Herman and Zittel, K. A. Palæontographica: Beiträge zur Naturgeschichte der Vorwelt.
Vols. I. to XVIII., and Vols. XX., XXI. and XXII., and Supplemental volume, text and plates, as far as published.
22 vols. 4to. Cassel, 1851-1874.
- EDWARDS, F. E. A Monograph on The Eocene Mollusca, or Descriptions of Shells from the Older Tertiaries of England. Parts I., II., III.
332 pp., XXXIII. plates. London, 1848-1858.
- FORBES, Prof. E. A Monograph on The Radiaria of the Crag, London Clay, &c. 39 pp., IV. plates. London, 1852.
- GEINITZ, H. B. Die Leitpflanzen des Rotliegenden und des Zechsteingebirges oder der permischen Formation in Sachsen. Vol. VII., Pamphlets. Quarto series.
4to. 27 pp., II. plates. Leipsig, 1858.
- GEOGRAPHICAL and Geological Explorations and Surveys West of the One Hundredth Meridian.—Reports.
Cope, E. D. Systematic Catalogue of Vertebrata of the Eocene of New-Mexico, collected in 1874.
8vo. 37 pp. Washington, 1875.
- White, C. A. Preliminary Report upon Invertebrate Fossils collected by the expeditions of 1871, 1872 and 1873, with Descriptions of New Species.
8vo. 27 pp. Washington, 1874.
- GEOLOGICAL Survey of Canada.—Publications.
Billings, E. Palæozoic Fossils. Vol. II., plates. Part I.
8vo. 144 pp., IX. plates. Montreal, 1873.
- Dawson, J. W. Report on the Fossil Plants of the Lower Carboniferous and Millstone Grit Formations of Canada.
8vo. 47 pp., X. plates. Montreal, 1873.
- GEOLOGICAL Survey of the State of California.—Final Reports.
Palæontology. Vol. I. Carboniferous and Jurassic Fossils by F. B. Meeks. Triassic and Cretaceous Fossils by W. M. Gabb.
3 vols. 4to. 1869.
- GÖPPERT, H. R. Beiträge zur fossilen und lebenden Flora. Vol. x., Pamphlets. Quarto series.
4to. 20 pp. Breslau, 1860.
- Der Palæontologie in Schlesien, sowie über fossile Leycadeen.
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- GUMBEL, W. Theodor. Die fünf Würfelschnitte. Ein Versuch die verschiedenen Krystallgestalten in einen einigen Zusammenhang zu bringen.
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- GUTBIER, A. von. Ueber einen fossilen Farrenstam Caulopteris Freieslebeni aus dem Zwickauer Schwartzkohlengebirge. Vol. XXII., Pamphlets. Octavo series.
8vo. 16 pp. Zwickau, 1872.
- HALL, A. Contributions to Palæontology, 1858 and 1859. Vol. XXIII., Pamphlets. Octavo series.
8vo. 73 pp. 1859.
- James, and Whitney, J. D. Report on the Geological Survey of the State of Iowa, embracing the Results of Investigations made during portions of the years 1855, 1856 and 1857. Vol. I., Part 2. Palæontology.
4to. 1858.

- HARTUNG, George. Die Azoren in ihrer äusseren Erscheinung und nach ihrer Geognostischen Natur. Mit beschreibung der Fossilen reste von H. G. Bronn.
2 vols. text and plates. Leipzig, 1860.
- HELLMAN, A. Die Petrefacten Thuringens nach dem Materiel des Herzogl. Naturalien-Kabinets in Gotha.
4to. 48 pp., XXIV. plates. Cassel, 1866.
- HISTOIRE Naturelle de Jura et des Departments Voisins. Tome I. Premiere Fascicule. Ogerien, Le Frere. Geographie, Physique, Meteorologie, Agriculture, Minerale, Mineralogie, Petrologie et Paleontologie.
8vo. Paris, 1863.
- HITCHCOCK, Edward. Ichnology of New-England. A Report on the Sandstone of the Connecticut Valley, especially its Fossil Footmarks.
4to. 220 pp., LX. plates. Boston, 1858.
- HOLMES, F. S. The Post-Pleiocene Fossils of South Carolina.
4to. 122 pp., XXVIII. plates. Charleston, S. C., 1860.
- HUXLEY, Thomas H., and Etheridge, Robert. A Catalogue of the Collection of Fossils in the Museum of Practical Geology, with an explanatory introduction. 381 pp. London, 1860.
- JOHNSTRUP, F. Oversigt over de palaeozoiske Dannelser paa Bornholm.
12mo. 10 pp. Copenhagen, 1874.
- JONES, T. Rupert. A Monograph on The Crag Foraminifera of Great Britain.
78 pp., IV. plates. London, 1866.
- A Monograph on The Tertiary Entomostraca of Great Britain.
74 pp., VI. plates. London, 1857.
- A Monograph on The Entomostraca of the Cretaceous Formation of England.
41 pp., VII. plates. London, 1850.
- A Monograph on The Fossil Estheriæ of Great Britain.
137 pp., V. plates. London, 1863.
- KIMBALL, J. P. Flora from the Appalachian Coal Field. *Inaugural Dissertation*.
8vo. 28 pp., III. plates. Gottingen, 1857.
- KING, Prof. W. A Monograph on The Fossils of the Permian Formation of England. 287 pp., XXIX. plates. 1850-1855.
- KONINCK, L. De. Mémoire sur les Crustacés Fossiles de Belgique.
Vol. VI., Pamphlets. Quarto series. 4to. 20 pp., I. plate. 1861.
- Monographie des Productus.
4to. XVII. plates. Liege, 1847.
- Notice sur Deux Espèces de Brachiopodes. 10 pp., I. plate.
- LAURE, G. C. Die Echinoiden der Oesterreichischen Ungarischen Oberen Tertiärlagerungen.
4to. 75 pp. Vienna, 1871.
- LOGAN, W. E. Notes on Fossils recently obtained from the Laurentian Rocks of Canada, and on Objections to the Organic Nature of Eozoon; with notes by W. B. Carpenter.
Vol. XXII., Pamphlets. Octavo series. 8vo. 9 pp., II. plates. 1867.
- On New Specimens of Eozoon. 12mo. 5 pp. 1867.
- The same as above. 12mo. 12 pp., II. plates. 1867.
- and others. On the History of Eozoon Canadense.
Vol. XX., Pamphlets. Octavo series. February, 1865. 8vo. 39 pp.
- LUNDGREN, B. Palæontologiska Iakttagelser öfver Faxekalken på Limphamm.
4to. 31 pp., I. plate.

- MARSH, O. C. Notice of some Fossil Birds from the Cretaceous and Tertiary Formations of the United States. 8vo. 16 pp. 1870.
- Description of the Remains of a new Enaliosaurian, (*Eosaurus Acadianus*), from the Coal Formation of Nova Scotia. 8vo. 16 pp., II. plates. London, 1862.
- MEEK, F. B. Notice of a Genus of Fossil Sponges from the Lower Silurian. Vol. XXVI., Pamphlets. Octavo series. 8vo. 1 p. 1867.
- and Gabb, W. M. Geological Survey of California. Palæontology. Vol. I. Carboniferous and Jurassic Fossils, by F. B. Meek. Triassic and Cretaceous Fossils, by W. M. Gabb. Vol. II. Cretaceous and Tertiary Fossils, by W. M. Gabb. 2 vols. 8vo. 1864, 1869.
- MILNE, Edwards, and Haime, J. A Monograph of The British Fossil Corals. Parts I. to V. 406 pp., LXXII. plates. London, 1849–1854.
- MORRIS, J., and Lycett, John. A Monograph of the Mollusca from the Great Oolite, chiefly from Minchinhampton and the Coast of Yorkshire. 282 pp., XXX. plates. London, 1850–1863.
- Supplement to above, by Lycett, John. 129 pp., XV. plates. London, 1863.
- MURCHISON, R. J. Siluria. 8vo. 566 pp., XL. plates. London, 1869.
- Verneuil, E. de, and von Keyserling, Alexander. The Geology of Russia in Europe and the Ural Mountains. Vol. II., (in French.) Paléontologie. 512 pp., L. plates. 4to. London, 1845.
- NATURAL History of the State of New-York. Part VI. Palæontology. Hall, James. Vol. 1. Organic Remains of the Lower Division of the New-York System. 838 pp., LXXXV. plates. Vol. 2. Organic Remains of the Lower Middle Division of the New-York System. 362 pp., LXXXIV. plates. 1859. Vol. 3. Organic Remains of the Lower Helderberg Group and the Oriskany Sandstone. Text, 532 pp.; Atlas, CXX. plates. Vol. 4. Part I. Fossil Brachiopoda of the Upper Helderberg, Hamilton, Portage, and Chemung Groups. 428 pp., LXIII. plates. 1852. 4 vols. 4to. Albany, 1842–1867.
- NEWBERRY, J. S. Description of Fossil Fishes from the Carboniferous Strata of Ohio. Vol. XXI., Pamphlets. Octavo series. 8vo. 5 pp. 1856.
- Description of Fossil Plants, from the Chinese Coal-Bearing Rocks. 4to. 5 pp., I. plate. Philadelphia, 1865.
- Description of Fossil Plants collected by Mr. George Gibbs, Geologist of the United States Northwest Boundary Commission. 8vo. 19 pp. Cambridge, 1863.
- Notes on American Fossil Fishes. 8vo. 6 pp. 1862.
- The Geological Survey of the State of Ohio. Final Report. Vol. I. Part 2. Palæontology. Vol. II. Part 2. Palæontology. 2 vols. 8vo. Columbus, 1873, 1875.
- NYST, H., Jr. Recherches sur les Coquilles Fossiles de Housselt et de Kleyn-Spauwen. 8vo. 40 pp., IV. plates. Gand, 1836.

- OWEN, *Prof.* Monograph on The Fossil Reptilia of the Cretaceous Formation. Part I., and Supplements 1 to 4.
4to. 184 pp., LIX. plates. London, 1851-1862.
- Monograph on The Fossil Reptilia of the Wealden and Purbeck Formations. Parts I. to V., and Supplements 1 to 3.
4to. 153 pp., LXII. plates. London, 1853-1864.
- A Monograph on The Reptilia of the Kimmeridge Clay Formation of Great Britain. 16 pp., VI. plates. 1861-1869.
- A Monograph on The Reptilia of the Liassic Formation.
121 pp., XXXVII. plates. 1861-1870.
- A Monograph on The Cetacea of Great Britain.
40 pp., V. plates. 1870.
- A Monograph on The Fossil Mammalia of the Mesozoic Formations of Great Britain. 115 pp., IV. plates. 1871.
- and Bell, *Prof.* Monograph on the Fossil Reptilia of the London Clay, and of the Bracklesham and other Tertiary Beds. Part I.; and Part I., Supplement 1. Chelonia.
79 pp., XL. plates. 1849.
- Parts II., III., and Part II., Supplement 1. Crocodilia.
68 pp., XVIII. plates. 1849.
- PANDER, C. H. Ueber die Placodermen des Devonischen Systems.
4to. 106 pp., XII. plates. St. Petersburg, 1867.
- Ueber die Saurodiptherinen, Dendrodonten, Glyptolepiden und Cheirolepiden des Devonischen Systems. Vol. VI., Pamphlets. Quarto series. 4to. 89 pp., XVII. plates. St. Petersburg, 1860.
- PARKINSON, James. An Introduction to the Study of Fossil Organic Remains. 8vo. 350 pp. 1830.
- PHILLIPS, *Prof.* A Monograph on The Belemnites of Great Britain. Parts I. to IV. 128 pp., XXXVI. plates. 1856-1870.
- POWRIE, J., and Lankester, E. Ray. A Monograph on The Fishes of the Old Red Sandstone. 62 pp., XIV. plates. 1868-1870.
- QUENSTEDT, Friederich Auguste. Atlas des Petrefactenkunde.
8vo. 86 pp. Tübingen, 1867.
- Die Mastodonsaurien. Folio. 34 pp. Tübingen, 1850.
- Handbuch der Petrefactenkunde. 8vo. 982 pp. 1867.
- Petrefactenkunde Deutschlands mit Besonderer Rücksicht auf Württemberg. 12mo. 580 pp. Tübingen, 1846.
- Petrefactenkunde. Die Cephalopoden.
8vo. 580 pp. text; Atlas, 4to. XXXVI. plates.
- RATHBUN, Richard. On the Devonian Brachiopoda of Ereré, Province of Pará, Brazil. 8vo. 3 pp. Buffalo, 1874.
- REDFIELD, J. F. Catalogue of the Known Species, Recent and Fossil, of the Family Marginellidæ. 8vo. 54 pp.
- RICHTER, R. Beitrag zur Paleontologie des Thüringer Waldes.
4to. Dresden, 1849.
- ROEHL, E. von. Fossile Flora der Steinkohlen-Formation Westphaliens. 4to. 191 pp., XXXII. plates. Cassel, 1868.
- RYCHALT, *Le Baron* P. Mélanges Paléontologiques. Part I.
176 pp., X. plates.

- SALTER, J. W. A Monograph of The Trilobites of the Mountain limestone, Devonian, Silurian, and other Formations of Great Britain. 216 pp., XXXI. plates. London, 1864-1867.
- SANDBERGER, Fridolin. Die Land-und Süsswasser-Conchylien der Vorwelt. 4to. text and plates. Wiesbaden, 1870-1873.
- SCHMERLING, P. C. Recherches sur les Ossements Fossiles. 2 vols. 4to. text; 2 vols. 2to. plates. Liege, 1833-1836.
- Fossiles du Portugal. 8vo., X. plates. 1850.
- The Secondary Rocks and Fossils of Portugal. 8vo. 100 pp., VI. plates. London, 1849, 1850.
- SHARPE, D. A Monograph on The Upper Cretaceous Cephalopoda. 67 pp., XXVII. plates. London, 1853-1857.
- TORELL, Otta. Bidrag till Sparagmitetagens geognosi och paleontologi. 4to. 40 pp., III. plates.
- TORNQVIST, (Sv. Leonh.) Om Fågelsångstraktens Undersiluriska. Vol. VII., Pamphlets. Quarto series. 4to. 24 pp., II. plates.
- Om lagerföljden i Dalarnes undersiluriska bildningar. Vol. VII., Pamphlets. Quarto series. 4to. 20 pp., I. plate.
- TUOMEY, M., and Holmes, F. S. The Pleiocene Fossils of South Carolina. 52 pp., XXX. plates. The Post Pleiocene Fossils. 64 pp., X. plates. 4to. Charleston, S. C., 1857.
- UNITED STATES and Mexican Boundary Survey. Part I. Subdivision 2. Geological Reports by Dr. H. C. Parry and Arthur Schott. Notes by W. H. Emory. Palæontology and Geology of the Boundary by James Hall. Description of Cretaceous and Tertiary Fossils by T. A. Conrad. 4to. Washington, 1859.
- UNITED STATES Geological Survey of the Territories. Final Report. Vol. I. Leidy, Joseph. Fossil Vertebrates. Part I. Contributions to the Extinct Vertebrate Fauna of the Western Territories. 4to. 358 pp., XXXVII. plates. 1873.
- VAN BENDEN, P. J. Un Palaedaphus Nouveau du Terrain Dévonien. Vol. XXII., Pamphlets. Octavo series. 16 pp., I. plate.
- WAGNER, Andreas. Monographie der fossilen Fische aus den lithographischen Schiefer-Bayeres. 4to. 138, 136 pp., IV., VI. plates. Munich, 1861-1863.
- WARD, H. A. Notice of the Megatherium Cuvieri, the Giant Fossil Ground Sloth of South America. 4to. 34 pp., I. plate. Rochester, 1864.
- WARREN, J. C. The Mastodon Giganteus of North America. 4to. 219 pp., XXVIII. plates. Boston, 1862.
- WERNER, A. G. A Treatise on the External Character of Fossils. Translated by Thomas Weaver. 12mo. 312 pp. Dublin, 1865.
- WINKLER, G. G. Die Schichten der Avicula Contorta inner-und ausserhalb der Alpen. 8vo. 51 pp., II. plates. Munich, 1859.
- WOOD, Searles V. A Monograph of The Mollusca of the Crag, or Description of Shells from the Middle and Upper Tertiaries of the East of England. Vols. I., II. and Supplement. London, 1848-1872.
- WOODWARD, H. A Monograph on The Fossil Merostomata of Great Britain. 120 pp., XV. plates. London, 1866-1872.

- WOODWARD, S. P. A Rudimentary Treatise on Recent and Fossil Shells. 12mo. 486 pp. London, 1851-1856.
- WORTHEN, A. H., Whitney, J. D., &c. The Geological Survey of the State of Illinois. Vol. II. Palæontology. Vol. III. Geology and Palæontology. 2 vols. 4to. Chicago, 1866-1868.
- WRIGHT, Thomas. A Monograph on The British Fossil Echinodermata from the Oolitic Formations. Vols. I, II. London, 1857-1866.
- The Cretaceous Echinodermata. Vol. I. 160 pp., XLV. plates. London, 1864-1865.
- ZIGNO, A. de. Flora fossilis Formationis Oolithica. Vol. I. 4to. 223 pp., XXV. plates. Padova, 1856-1868.

See, also, Geology and Geognosy, p. 298.

DESCRIPTIVE MINERALOGY.

- ALLAN, R. A Manual of Mineralogy.
8vo. 351 pp. Edinburgh, 1834.
- T. Mineralogical Nomenclature, with Synoptic Tables of the Chemical Analysis of Minerals. 8vo. Edinburgh, 1814.
- BEHRENS, H. Mikroskopische Untersuchungen über die Opale.
8vo. 38 pp., II. plates. 1871.
- BERGMAN, Torbern. Manuel de Mineralogiste ou Sciagraphie du Règne Mineral.
2 vols. 8vo. Paris, 1784.
- BERZELIUS, J. J. An Attempt to Establish a System of Mineralogy. Translated from the Swedish by John Black.
8vo. 144 pp. London, 1814.
- Neues System der Mineralogie.
8vo. 14 pp. Nurnberg, 1816.
- Nouveau Système de Mineralogie.
12mo. 314 pp. Paris, 1849.
- BEUDANT, F. S. Traité Elémentaire de Mineralogie. Second edition.
2 vols. 8vo. Paris, 1832.
- BLUM, J. R. Die Pseudomorphosen des Mineralreiches mit Erste u Zweite Nachtragen.
12mo. 378, 213, 140 pp. Stuttgart, 1843.
- Dritte Nachtrage zu Den Pseudomorphosen des Mineralreichs.
12mo. 294 pp. Erlangen, 1863.
- Lehrbuch der Mineralogie. (Oryktognosie.) Erste Abtheilung.
8vo. Stuttgart, 1873.
- Lehrbuch der Oryktognosie. 8vo. 509 pp. Stuttgart, 1833.
- Lithurgik oder Mineralien und Felsarten.
8vo. 501 pp. Stuttgart, 1840.
- BOEDECKER, C. Die Zusammensetzung der Natürlichen Silicate.
8vo. 156 pp. Göttingen, 1857.
- BREITHAUPT, A. Die Paragenesis der Mineralien.
8vo. 276 pp. Freiberg, 1849.
- Vollständiges Handbuch der Mineralogie.
3 vols. 8vo. Dresden, 1836, 1841, 1847.
- BRISTOW, H. W. A Glossary of Mineralogy.
12mo. 420 pp. London, 1861.
- BROCHANT, J. M. Traité Élémentaire de Mineralogie.
2 vols. 8vo. Paris, 1809.
- BROGNIART, A. Introduction à la Mineralogie.
8vo. 159 pp. Paris, 1825.
- Traité Elémentaire de Mineralogie. 2 vols. 8vo. Paris, 1807.
- BRUSH, George J. Appendix to the Fifth Edition of Dana's Mineralogy.
8vo. 19 pp. New-York, 1872.
- Eighth Supplement to Dana's Mineralogy. Vol. XII., Pamphlets. Octavo series.
8vo. 1860.

- BRUSH, George J. Ninth Supplement to Dana's Mineralogy. Vol. XII., Pamphlets. Octavo series. 8vo. 1861.
- Tenth Supplement to Dana's Mineralogy. Vol. XII., Pamphlets. Octavo series. 8vo. 1862.
- Mineralogical Notes. 8vo. 1858.
- On Amblygonite from Hebron, Maine. Vol. XII., Pamphlets. Octavo series. 8vo. 2 pp. 1862.
- On a Variety of Galena from Lebanon County, Pa. 8vo. 1863.
- CLEAVELAND, Parker. An Elementary Treatise on Mineralogy and Geology. 8vo. 668 pp. Boston, 1816.
- The same. 2 vols. 8vo. Boston, 1816.
- DANA, J. D. A System of Mineralogy, including an extended Treatise on Crystallography; with an Appendix, containing the Application of Mathematics to Crystallographic Investigation, and a Mineralogical Bibliography. 8vo. 452 pp., 119 pp. New-Haven, 1837.
- Same as above. Second edition. 8vo. New-York, 1844.
- Same as above. Third edition. 8vo. 711 pp. New-York, 1850.
- Same as above. Fourth edition. 8vo. 533 pp. New-York, 1858.
- Same as above. Fifth edition. 8vo. 846 pp. New-York, 1868.
- Manual of Mineralogy, including Observations on Mines, Rocks, Reduction of Ores, and the Applications of the Science to the Arts. 8vo. 430 pp. New-Haven, 1848.
- Mineralogical Contributions. 8vo. 11 pp. 1854.
- Notice of Dr. Blum's Treatise on Pseudomorphous Minerals and Observations on Pseudomorphism. 8vo. 28 pp. 1845.
- On the Homeomorphism of Mineral Species of the Trimetric System. 8vo. 28 pp. 1854.
- On the Isomorphism and Atomic Volume of some minerals, with a table of Atomic Weights. 8vo. 29 pp. 1850.
- DAUBER, H. Svangit und Beudanit. Vol. II., Pamphlets. Duodecimo series. 12mo. 2 pp.
- Untersuchungen an Mineralien der Sammlung des Hrn. Dr. Krantz in Bonn No. 2. Vol. X., Pamphlets. Octavo series. 8vo. 27 pp.
- Same as above. No. 3. Vol. X., Pamphlets. Octavo series. 8vo. 15 pp., I. plate.
- Same as above. No. 6. Vol. X. Pamphlets. Octavo series. 8vo. 27 pp.
- DE BOURNON, *The Count*. Cours de Mineralogie. 3 vols. 4to. text, Atlas 4to., LXXII. plates. London, 1808.
- DE LA FOSSE, G. Rapport sur les Progrès de la Mineralogie. 8vo. 97 pp. Paris, 1867.
- DELAMÉTHÉRIE, J. C. Leçons de Mineralogie. 2 vols. 8vo. Paris, 1872.
- DUFRENOY, A. Cours de Mineralogie. 4to. 336 pp. Paris, 1847.

- DUFRENOY, A. *Traité de Mineralogie*. Seconde edition.
5 vols. 8vo. Paris, 1856-1859.
- EGLESTON, T. *A Catalogue of Minerals*. Vol. XI, Pamphlets. Octavo series. 8vo. 42 pp. Washington, 1863.
- *A Check List of the Silicates, with their formulæ and crystalline Systems*. Prepared for the use of the students of the School of Mines of Columbia College. Vol. XII, Pamphlets. Octavo series. 8vo. 12 pp. New-York, 1866.
- *Lectures on Mineralogy*. Delivered at the School of Mines of Columbia College. Part 2. *Descriptive Mineralogy*. 8vo. 187 pp. New-York, 1871.
- EXNER, Franz. *Untersuchungen über die Härte an Krystallflächen*. *Prize Essay*. 8vo. 165 pp., LXVIII. plates. Vienna, 1873.
- EYEREL, Josephus. *Xaverii Wulfen de Plumbo Spatoso Carinthiaco*. 4to. 108 pp. Vindobonæ, 1791.
- FISCHER, H. *Chronologischer Ueberblick über die Allmälige Einführung der Mikroskopie, in das Studium der Mineralogie, Petrographie u. Paleontologie*. 8vo. 80 pp. Freiberg, 1868.
- *Einführung der Mikroskopie in der Mineralogie, &c.* 8vo. 80 pp. Freiberg, 1868.
- *Kritische mikroskopisch-mineralogische Studien*. 8vo. 64 pp. Freiberg, 1871.
- *The same*. 8vo. 96 pp., II. plates. Freiberg, 1873.
- FUCHS, C. W. C. *Die Kunstlich Dargestellten Mineralien nach G. Rose's Krystallo-Chemisch System geodnet*. 4to. 174 pp. Harlem, 1872.
- GEINITZ, H. B. *Das Königlich Mineralogische Museum in Dresden*. Vol. I., Pamphlets. Duodecimo series. 12mo. 110 pp., II. plates. Dresden, 1858.
- GENTH, F. A. *Contributions to Mineralogy*. 8vo. 13 pp. 1857.
- *The same as above*. 8vo. 10 pp. 1859.
- *The same as above*. 8vo. 17 pp. 1868.
- *The same as above*. 8vo. 18 pp. Philadelphia, 1862.
- *On Tetradymite*. Reply to Dr. C. T. Johnson, of Boston. Vol. XI, Pamphlets. Octavo series. 8vo. 3 pp. 1861.
- *Re-examination of the Tetradymite, (Bornite-Jackson,) from Field's Gold Mine, Georgia*. 8vo. 4 pp. 1860.
- GREGG, R. P., and Lettson, W. G. *Manual of Mineralogy of Great Britain and Ireland*. 8vo. 483 pp. London, 1858.
- HAIDINGER, Wilhelm. *Herapathit-Zängen*. Vol. XII., Pamphlets. Octavo series. 8vo. 6 pp. 1855.
- *Mineralogical Account of the Ores of Manganese*. Vol. IX., Pamphlets. Quarto series. 4to. 24 pp., I. plate. Edinburgh, 1827.
- *On Isopyre, a new Mineral Species*. Vol. XII., Pamphlets. Octavo series. 8vo. 2 pp. 1827.
- *On Polyhalite*. Vol. X., Pamphlets. Octavo series. 8vo. 16 pp.
- HARTMANN, Carl. *Handbuch der Mineralogie*. 2 vols. 8vo. Weimar, 1843.
- HAUSMANN, J. F. L. *Handbuch der Mineralogie*. 3 vols. 12mo. Gottingen, 1828.

- HAUY, C. *Traité de Mineralogie*.
4 vols. 4to. text; Atlas of plates. Paris, 1801.
- HESSENBERG, F. *Mineralogische Notizen*. 4to. Frankfort, 1861.
- HEULAND, H. *Description d'une collection des Minéraux*.
3 vols. 8vo. text; 1 vol. 4to. LXXXIII. plates. London.
- How, Henry. *The Mineralogy of Nova Scotia*.
8vo. 217 pp. Halifax, 1869.
- JAMESON, R. *A System of Mineralogy*.
2 vols. 8vo. Edinburgh, 1804.
- JOHNSON, James F. W. *Description and Analysis of Hatchetine*,
found in Urpeth Colliery, near Newcastle. Vol. IX., Pamphlets.
Quarto series. 4to. 7 pp. 1837.
- JULIEN, Alexis A. *On Metabrushite, Zeugite, Ornithite and other*
minerals of the Key of Sombrero. Vol. XII., Pamphlets. Octavo series.
8vo. 13 pp. 1865.
- KEATING, W. H. *Account of the Jeffersonite, a New Mineral*.
8vo. 12 pp. Philadelphia, 1822.
- KENNGOTT, Adolf. *Die Minerale der Schweiz*.
12mo. 460 pp. London, 1866.
- *Mineralogische Notizen*. 15 Pamphlets under this title.
1853–1854. Vol. XXXVI., Pamphlets. Octavo series.
- *Übersicht der Resultate Mineralogischer Forschungen*.
6 vols. 4to. Leipsig, 1844–1865.
- KIDD, John. *Outlines of Mineralogy*. 2 vols. 8vo. Oxford, 1809.
- KIMBALL, J. P. *On Sodalite and Elæolite*. Vol. XI., Pamphlets. Octavo
series. 8vo. 4 pp. 1870.
- KIRWAN, Richard. *Elements of Mineralogy*. Vol. I. Earths and
Stones. Vol. II. Salts. Inflammables and Metallic Sub-
stances. 2 vols. 8vo. London, 1794, 1796.
- KLAPROTH, Martin H. *Analytical Essays towards Promoting the*
Knowledge of Mineral Substances.
2 vols. 12mo. London, 1801.
- KOBELL, Franz von. *Grundzüge der Mineralogie*.
8vo. 348 pp. Nuremburg, 1838.
- KOCH, Friederich. *Beiträge zur Kenntniss Krystallinischen Hüt-*
tenproducte. 12mo. 88 pp. Gottingen, 1822.
- KOKSCHAROW, N. v. *Materialien zur Mineralogie Russlands*.
4 vols. 8vo. text; Atlas, LVIII. plates. St. Petersburg,
1853–1861.
- *Vorlesungen über Mineralogie*. Erster Band.
4to. 344 pp. St. Petersburg, 1865.
- KURR, J. G. v. *Das Mineralreich in Bildern*.
4to. XXII. plates. Stuttgart, 1858.
- LANDGREBE, G. *Über die Pseudomorphism im Mineralreich*.
8vo. 343 pp. Cassel, 1831.
- LEONHARD, Gustav von. *Katechismus der Mineralogie*.
12mo. 110 pp. Leipsig, 1862.
- *Grundzüge der Mineralogie*.
8vo. 404 pp. Heidelberg, 1860.
- LOTH, J. *Lehrbuch der Chemie und Mineralogie*.
12mo. 388 pp. Leipsig, 1872.

- MARSH, O. C. Catalogue of Mineral Localities in New-Brunswick, Nova Scotia and Newfoundland. Vol. XII., Pamphlets. Octavo series. 8vo. 8 pp. 1863.
- Contributions to the Mineralogy of Nova Scotia. Vol. X., Pamphlets. Octavo series. 8vo. 5 pp. 1867.
- The Gold of Nova Scotia. 8vo. 7 pp. New-Haven, 1861.
- MILLIN, Aubin Lewis. Mineralogie Homérique. 8vo. 118 pp. Paris, 1790.
- MOESTA, Federico. Plann de las pertenencias del mineral de Chancillo. 1862.
- MOHS, Friederich. Die Charactere der Klassen, Ordnungen, Geschlechter und Arten, oder die Charakteristik des Mineral-Systems. 8vo. 226 pp. Dresden, 1826.
- MOORE, N. F. Ancient Mineralogy. Second edition. 12mo. 250 pp. New-York, 1859.
- NATURAL History of the State of New-York. Part III. Mineralogy. Beck, Lewis C. 586 pp., XLI. plates, 1842.
- NAUMANN, C. F. Elemente der Mineralogie. Third edition. 8vo. 448 pp. Leipsig, 1852.
- The same as above. Sixth edition. 8vo. 500 pp. Leipsig, 1864.
- The same as above. Seventh edition. 8vo. 566 pp. Leipsig, 1868.
- The same as above. Eighth edition. 8vo. 606 pp. Leipsig, 1871.
- NICOL, J. Manual of Mineralogy; or, the Natural History of the Mineral Kingdom. 8vo. 596 pp. Edinburgh, 1849.
- PARTSCH, Paul. Katalog der Bibliothek des K. K. Hof—Mineralien Cabinets in Wien. 4to. 232 pp. Vienna, 1851.
- Uebersicht der im K. K. Hof—Mineralien-Kabinét zu Wien zu Schaugestellten acht Sammlung. 12mo. 144 pp. Vienna, 1855.
- PETERS, C. F. Mineralogische Notizen, No. 3. 8vo. 12 pp.
- PHILLIPS, William. An Elementary Introduction to the Knowledge of Mineralogy. 8vo. 406 pp. London, 1823.
- The same as above. Fifth edition, by F. Alger. 8vo. 662 pp. Boston, 1844.
- The same as above. Sixth edition. Edited by H. J. Brooke and W. H. Miller. 8vo. 700 pp. London, 1852.
- PICHEL, J. E. von. Mineralogische Aufsätze. 8vo. 374 pp. Vienna, 1794.
- PUJOULX, J. B. Mineralogie à L'Usage des Gens du Monde. 12mo. 533 pp. Paris, 1813.
- QUENSTEDT, Friederich Auguste. Handbuch der Mineralogie. 8vo. 728 pp. Tübingen, 1855.
- The same as above. 8vo. 816 pp. Tübingen, 1863.
- RAMMELSBERG, Karl Friederich. Ueber die Isomorphie der Sulfate von Kadmium, Didymium und Atrium. Vol. XII., Pamphlets. Octavo series. 8vo. 8 pp. 1861.

- RATH, G. von. Mineralogische Mittheilungen, No. 3. Vol. X., Pamphlets.
Octavo series. 8vo. 37 pp., I. plate. 1863.
- RIEDEL, Jakob. Grundzüge der Mineralogie.
8vo. 194 pp. Heidelberg, 1871.
- RIVIÈRE, A. Précis de Mineralogie. 8vo. 408 pp. Paris, 1864.
- ROBINSON, S. A Catalogue of American Minerals, with their Localities.
8vo. 316 pp. Boston, 1825.
- ROSE, Gustav. Beschreibung einiger neuen Mineralien vom Urals.
Vol. X., Pamphlets. Octavo series. 8vo. 22 pp.
- Die Heteromorphen Zustände der Kohlensauren Kalkerde.
Vol. X., Pamphlets. Octavo series. 8vo. 14 pp. Berlin, 1860.
- Die Edentität des Edwardsit u. Monagit. Vol. X., Pamphlets.
Octavo series. 8vo. 7 pp., I. plate.
- Mineralogisch Geognostische Reise nach dem Ural, dem Altai und dem Kierpathische Meere.
2 vols. 8vo. Berlin, 1837–1842.
- Ueber Schaumkalk als Pseudomorphose von Aragonit.
8vo. 12 pp., I. plate. 1855.
- RUMPF, J. von. Über Hartit aus der Kohle von Oberdorf und den Angrenzenden Gebieten von Voitsberg und Köflach in Steiermark. Vol. XI., Pamphlets. Octavo series.
8vo. 10 pp., II. plates. 1869.
- SCHARF, F. Über den Gypspath.
4to. 39 pp. Frankfort on the Main, 1871.
- SCHRAUF, Albrecht. Monographie des Columbit. Vol. XV., Pamphlets.
Octavo series. 8vo. 19 pp., VII. plates. Vienna, 1861.
- Studien an der Mineralspecies: Labradorit. Vol. XI., Pamphlets.
Octavo series. 8vo. 58 pp., V. plates, 1869.
- SILLIMAN, Benjamin, Jr. Description and Analysis of Several Minerals.
8vo. 18 pp. 1848.
- SIMONIN, L. Les Pierres Esquisses Mineralogiques.
8vo. 516 pp. Paris, 1869.
- SMITH, J. Lawrence. On the Minerals of the Wheatly Mine, in Pennsylvania.
8vo. 14 pp. New-Haven, 1855.
- Re-examination of American Minerals. Part 4.
8vo. 11 pp. 1854.
- Report on the Minerals and Mineral Waters of Chili.
4to. 25 pp.
- Scientific Researches. 8vo. 401 pp. Louisville, Ky., 1873.
- and Brush, George J. Re-examination of American Minerals. Part 1. Vol. XII., Pamphlets. Octavo series.
8vo. 9 pp. 1853.
- SMYTH, W. W. Catalogue of the Mineral Collections in the Museum of Practical Geology. 8vo. 190 pp. London, 1864.
- SOCHLING, E. Die Einschlüsse von Mineralien.
8vo. 357 pp. Freiberg, 1860.
- STORY Maskelyne, Nevil. A Guide to the Collection of Minerals in the British Museum. Vol. X., Pamphlets. Octavo series.
8vo. 16 pp. London, 1873.

- STORY Maskelyne, Nevil. Catalogue of the Collection of Meteorites exhibited in the Mineral Department of the British Museum. Vol. X., Pamphlets. Octavo series. 8vo. 8 pp. London, 1872.
- TAYLOR, W. J. Mineralogical Notes. Vol. XII., Pamphlets. Octavo series. 8vo. 4 pp. 1858.
- The same as above. 8vo. 5 pp. 1859.
- TENNANT, and Mitchell, Walter. Mineralogy and Crystallography. 12mo. 587 pp. London, 1860.
- THOMPSON, Thomas. Outlines of Mineralogy, Geology and Mineral Analysis. Seventh edition. 2 vols. 8vo. London, 1836.
- TSCHERMAK, G. Grundriss der Mineralogie für Schulen. 8vo. 218 pp. Vienna, 1863.
- Mineralvorkommnisse von Joachimsthal und Kremnitz. Vol. XI., Pamphlets. Octavo series. 8vo. 12 pp. 1867.
- VOLGER, G. H. O. Versuch einer Monographie des Borasites. 8vo. 244 pp. Hanover, 1855.
- ZAENDERLE, Max. Lehrbuch der Mineralogie. 8vo. 160 pp. Brunswick, 1873.
- ZIRKEL, Ferdinand. Die Mikroskopische Beschaffenheit der Mineralien und Gesteine. 8vo. 504 pp. Leipzig, 1873.

See, also, Periodical Publications, p. 351.
International Exhibitions.

DETERMINATIVE MINERALOGY AND BLOW-PIPE ANALYSIS.

- ACCUM, Frederick. A Manual of Analytical Mineralogy. Second edition. 2 vols. in one. 8vo. London, 1808.
- A Manual of Analytical Mineralogy. Vol. I. 12mo. 360 pp. London, 1808.
- BERZELIUS, J. J. Die Anwendung des Löthrohres. 8vo. 284 pp. Hamburg, 1844.
- BODEMAN, Th., and Kerl, Bruno. Anleitung zur Berg-und Hüttenmännischen Probirkund. 8vo. 580 pp. Clausthal, 1857.
- BRUSH, George J. Manual of Determinative Mineralogy, with an introduction on Blowpipe Analysis. 8vo. 104 pp. New-York, 1875.
- CHAPMAN, E. J. Practical Mineralogy, or a Compendium of the Distinguishing Characteristics of Minerals. 8vo. 192 pp. London, 1843.
- EGLESTON, Thomas. Tables for the Determination of Minerals. Arranged for the use of the students of the School of Mines, Columbia College, New-York. Second edition. 8vo. 42 pp. New-York, 1868.
- ELDERHORST, William. Manual of Qualitative Blowpipe Analysis and Determinative Mineralogy. Sixth edition. Edited by Henry B. Nason and Charles F. Chandler. 16mo. 312 pp. Philadelphia, 1874.
- FUCHS, C. W. C. Anleitung zum Bestimmen der Mineralien. 8vo. 144 pp. Heidelberg, 1868.

- HARTMANN, Hugo. Untersuchungen mit dem Löthrohr.
4to. 39 pp., XLII. plates. Leipsig, 1862.
- HOLLUNDER, C. F. Besuch einer Anleitung zur mineralogischen Probirkunst. 3 vols. 12mo. Nuremberg, 1826-1827.
- KERL, Bruno. Leitfaden bei qualitativen und quantitativen Löthrohr-Untersuchungen. 12mo. 158 pp. Clausthal, 1862.
- KOBELL, Franz von. Tafeln zur Bestimmung der Mineralien.
8vo. 110 pp. Munich, 1869.
- The same as above. 8vo. 108 pp. Munich, 1873.
- PLATTNER, Carl Freiderich. Beiträge zur Erweiterung der Probirkunst. 12mo. 106 pp. Freiberg, 1849.
- Die Probirkunst mit dem Löthrohre oder Anleitung Mineralien, Erze, Hüttenproducte und Verschiedene Metallverbindungen zu untersuchen. 8vo. 652 pp. Leipsig, 1847.
- The same as above. Fourth edition.
8vo. 680 pp. Leipsig, 1865.
- Manual of Qualitative and Quantitative Blowpipe Analysis. Translated by H. B. Cornwall.
8vo. 548 pp. New-York, 1872.
- SAUNDERS. System of Instruction in the Practical use of the Blowpipe. 12mo. 269 pp. New-York, 1858.
- SCHEERER, Theodor. Löthrohrbuch. 12mo. 293 pp. Brunswick, 1857.
- SYSTEM of Instruction (A) for the Practical Use of the Blowpipe. 12mo. 269 pp. New-York, 1858.
- TABLEAUX Analytiques des Mineraux. 4to. 95 pp. Brussels.
- WEISBACH, Albin. Tabellen zur Bestimmung der Mineralien. 12mo. 113 pp. Leipsig, 1869.

CRYSTALLOGRAPHY.

- AICHHORN, Sigmund. Anleitung zur Flächenzeichnung einfacher Krystallgestalten. 8vo. 56 pp. Vienna, 1865.
- BLUM, J. R. Die Mineralien nach Krystallsystemen geordnet. 8vo. 32 pp. Heidelberg, 1866.
- BROOKS, Henry J. A Familiar Introduction to Crystallography. 12mo. 505 pp. London, 1823.
- COOKE, J. P., Jr. Crystalline Form not necessarily an indication of Definite Chemical Composition. 8vo. 12 pp. 1860.
- DANA, J. D. See p. 326.
- DAUBER, H. Ermittelung Krystallographischer Constanten und des Grades Ihrer Zuverlässigkeit. Vol. IX., Pamphlets. Octavo series. 8vo. 26 pp., XII. plates. Vienna, 1860.
- DE SELLE, A. Comparaison et Transformation des Notations Cristallographiques de Levy, Miller, Weiss, Naumann, Dana. 4to. 86 pp. Paris, 1874.
- DEWALQUE, G. Atlas de Crystallographie. 8vo. 16 pp., XVIII. plates. Paris, 1862.
- EGLESTON, T. Diagrams to Illustrate the Lectures on Crystallography delivered at the School of Mines, Columbia College. 8vo. 10 pp., XXXVIII. plates. New-York, 1866.

- EGLESTON, T. The same as above. Second edition.
8vo. 46 pp., XL plates. New-York, 1874.
- EXNER, Franz. Untersuchungen über die Härte an Krystallflächen.
Prize Essay. 8vo. 165 pp., LXVIII. plates. Vienna, 1873.
- FRANKENHEIM, M. L. Zur Krystallkunde.
8vo. 214 pp. Leipzig, 1869.
- GRIFFIN, J. J. A System of Crystallography, with its Applications to Mineralogy. Part I. Principles of Crystallography. Part II. Crystallography applied to Mineralogy.
8vo. 346, 143 pp. Glasgow, 1841.
- GROTH, P. Tabellarische Übersicht der einfachen Mineralien nach ihren Krystallographischen-Chemischen Beziehungen.
8vo. 120 pp. Brunswick, 1874.
- GUMBEL, W. Theodor. Die Fünf Würfelschnitte. Ein Versuch die verschiedenen Krystallgestalten in einen einigen Zusammenhang zu bringen. Vol. II., Pamphlets. Quarto series.
4to. 19 pp., II. plates. Landau, 1852.
- HAIDINGER, Wilhelm. Die Krystalle des Essigsäuren Manganoxyduls. Vol. IX., Pamphlets. Octavo series. 8vo. 10 pp. 1855.
- HAUER, Julius Ritter von. Notizen über die Krystallisation und Darstellung, einiger Verbindungen. Vol. IX., Pamphlets. Octavo series.
8vo. 12 pp. Vienna, 1860.
- HAUSMANN, J. F. L. Neue Beiträge zur metallurgischen Krystallkunde.
4to. 14 pp. Gottingen, 1852.
- HAUY, C. Traité de Cristallographie. 2 vols. 12mo. Paris, 1822.
——— Tableau Comparatif des Resultats de la Cristallographie et de L'Analyse Chimique Relatifment à la Classification des Mineraux. 12mo. 312 pp., plates. Paris, 1809.
- KARSTEN, Herman. Lehrbuch der Krystallographie.
8vo. 169 pp. Leipzig, 1861.
- KENNGOTT, Adolph. Synonymik der Krystallographie.
8vo. 175 pp. Vienna, 1855.
- KOPP, Hermann. Einleitung in die Krystallographie.
8vo. 346 pp. text; Atlas, XXI. plates. Brunswick, 1869.
- Sechs Tafeln mit Netzen zu Krystallmodellen zu der Einleitung in die Krystallographie. Third edition.
4to. VI. plates. Brunswick, 1869.
- KRENNER, J. A. Krystallographische Studien über den Antimonit. Vol. IX., Pamphlets. Octavo series. 8vo. 46 pp., XI. plates. 1864.
- LANG, Viktor von. Lehrbuch der Krystallographie.
12mo. 358 pp., VII. plates. Vienna, 1866.
- LAURENT, Auguste. Précis de Cristallographie.
12mo. 104 pp. Paris, 1847.
- MARX, E. M. Geschichte der Krystallkunde.
8vo. 313 pp. Carlsruhe, 1825.
- MATZDORFF, J. Martius. Die Elemente der Krystallographie mit Stereoscopischer Darstellung der Krystallformen.
8vo. 105 pp. Brunswick, 1870.
- MILLER, William Hallows. A Treatise on Crystallography.
8vo. 139 pp. London, 1839.

- MILLER, William Hallows. Lehrbuch der Krystallographie. Uebersetzt und erweitert durch Dr. J. Grailich.
12mo. 328 pp., XIX. plates. Vienna, 1856.
- Traité de Cristallographie. Traduction Française par H. de Senarmont.
12mo. 208 pp. Paris, 1842.
- NEUMANN, C. F. Anfangsgrunde der Krystallographie.
8vo. 292 pp. Leipsig, 1854.
- QUENSTEDT, Friederich Auguste. Grundriss der bestimmenden und rechnenden Krystallographie nebst einer historischen anleitung.
8vo. 443 pp. Tübingen, 1873.
- Methode der Krystallographie.
8vo. 412 pp. Tübingen, 1840.
- RAMMELSBERG, Karl Friederich. Lehrbuch der Krystallkunde.
8vo. 236 pp. Berlin, 1852.
- Vergleichende Bemerkungen über die Krystallform organischer Verbindungen vom Typus des Antimoniaks. Vol. IX., Pamphlets. Octavo series.
8vo. 11 pp.
- RATH, G. von. Krystallographische Beiträge. Vol. II., Pamphlets. Duodecimo series.
12mo. 28 pp., I. plate. 1860.
- REGNAULT, Henri Victor. An Elementary Treatise on Crystallography.
8vo. 70 pp. London, 1848.
- ROSE, Gustav. Das Krystallo-Chemische Mineralsystem.
8vo. 156 pp. Leipsig, 1852.
- SADEBECK, Alexander. Gustav Rose's Elemente der Krystallographie. Third edition.
8vo. 181 pp. Berlin, 1873.
- SCHRAUF, Albrecht. Lehrbuch der Krystallographie und Mineral-Morphologie und Lehrbuch der Angewandten Physik der Krystalle.
2 vols. in 1. 8vo. Vienna, 1866-1868.
- SELLA, O. Quadro-delle Forme Cristalline dell'Argento Rosso, del Quarzo e del Calcare. Vol. II., Pamphlets. Duodecimo series.
12mo. 74 pp. Torino, 1856.
- SENF, Ferdinand. Die Krystallinischen Felsmengentheile nach ihren Mineralischen Eigenschaften, chemischen Bestandtheilen, Abarten, Umwandlungen Associationen und Felsbildungsweisen.
8vo. 749 pp. Berlin, 1868.
- TENNANT, and Mitchell, Walter. Mineralogy and Crystallography.
12mo. 587 pp. London, 1860.
- VON LANG, Victor. Lehrbuch der Krystallographie.
8vo. 358 pp. Vienna, 1866.
- WERNER, Gotthilf. Leitfaden zum studium der Krystallographie.
12mo. 145 pp. Hanover, 1867.
- ZEPHAROVICH, Von. Krystallographisches Wand Tafeln.
4to. XI. plates. Prag, 1865.

PRECIOUS STONES.

- BEHRENS, H. Mikroskopische Untersuchungen über die Opale.
8vo. 38 pp., II. plates. 1871.
- DE BOURNON, *The Count*. A Descriptive Catalogue of Diamonds
in the Cabinet of Sir A. Hume.
4to. 52 pp., V. plates. London, 1815.
- EMANUEL, H. Diamonds and Precious Stones.
8vo. 266 pp. London, 1867.
- GURLT, A. Übersicht der pyrogenneten Künstlichen Mineralien.
8vo. 100 pp. Freiberg, 1857.
- JEFFRIES, D. A Treatise on Diamonds and Pearls. Fourth edition.
8vo. 116 pp. London.
- KING, C. W. The Handbook of Engraved Gems.
8vo. 396 pp. London, 1866.
- The Natural History of Precious Stones and Gems, and of
the Precious Metals. 8vo. 442 pp. London, 1865.
- The Natural History of the Precious Stones, and of the
Precious Metals. 12mo. 364 pp. London, 1870.
- KLUGE, K. E. Handbuch der Edelsteinkunde für Mineralogen,
Steinschneider und Juweliere. 8vo. 561 pp. Leipzig, 1860.
- MAWE, John. A Treatise on Diamonds and Precious Stones.
8vo. 166 pp., III. plates. London, 1815.
- Travels in the Interior of Brazil; with a Particular Account
of the Gold and Diamond Districts.
8vo. 493 pp. London, 1821.
- SCHRAUF, Albrecht. Handbuch der Edelsteinkunde.
8vo. 252 pp. Vienna, 1869.
- TRAILL, G. W. An Elementary Treatise on Quartz and Opal.
12mo. 73 pp. Edinburgh, 1870.

ECONOMIC GEOLOGY.

AMERICAN Bureau of Mines Publications:

- On the Rock-Salt Deposit of Petit Anse, La. Vol. III., Pamphlets. Quarto series. 4to. 5 pp. New-York, 1867.
- BONE, J. H. A. Petroleum and Petroleum Wells. What Petroleum is, Where it is found, and What it is used for. Where to Sink Petroleum Wells, and how to sink them. With a Complete Guide Book of Pennsylvania, West Virginia, Kentucky and Ohio. 12mo. 153 pp. Philadelphia, 1865.
- BOUHY, V. De La Houille et en particulier des Diverses Espèces de Houilles Exploitées au Couchant de Mons, en Hainaut, (Belgique.) 8vo. 399 pp. Mons, 1855.
- BRAND, C. P. Mineralogie Appliquée aux Arts. 3 vols. 12mo. Paris, 1821.
- BURAT, Amédée. De la Houille, Traité Théorique et Pratique des Combustibles Minéraux. 8vo. 482 pp. Paris, 1851.
- Le Matériel des Houillères en France et en Belgique. 8vo. 519 pp. text, fol. XXXIII. plates. Paris, 1865.
- Memoire sur le Gisement de la Houille dans la Bassin de Saone-et-Loire. 8vo. 77 pp., IV. plates. Paris, 1812.
- Geologie Appliquée Traité du Gisement et de l'Exploitation des Utiles Minéraux. Première Partie. Geologie Pratique. Deuxième Partie. Exploitation des Mines. Quatrième édition. 2 vols. 8vo. 550, 540 pp., XXIX., XXXIII. plates. Paris, 1858, 1859.
- Geologie Appliquée. 2 vols. 8vo. Paris, 1870.
- Mineralogie Appliquée. Description des Minéraux Employés dans les Industries Metallurgiques et Manufacturiers. 8vo. 476 pp. Paris, 1864.
- CARTE über die Production, Consum und die Circulation des Mineral-Brennstoffes in Preussen während das Jahre, 1871. A chart. 12mo. 18 pp.
- DIE GRUBEN und Anlagen der Vereinigungs—Gesellschaft für Steinkohlenbau in Wurm—Revier zu Kohlschied bei Aachen. 8vo. Berlin, 1873.
- ERLAUTERUNGEN zu der Karte über die Production, Consumption und Circulation der mineralischen Brennstoffe in Preussen. 8vo. Berlin, 1873.
- FLECK, H., and Hurtig, H. Geschichte Statistik und Technik der Steinkohlen. 4to. 423 pp. Munchen, 1865.
- FLOETZ-KARTE des Niederrheinisch-Westfaehlichen Steinkohlenbeckens. 2to. XXI. plates.
- FOETTERLE, Franz. Das Vorkommen die Production und Circulation des Mineralischen Brennstoffes. Vol. XV., Pamphlets. Octavo series. 8vo. 28 pp., and chart 4to. Weimar, 1870.

- GEDDES, George. Annual Report of the Superintendent of the Onondaga Salt Springs. Vol. XVI., Pamphlets. Octavo series. 8vo. 35 pp. Albany, 1866.
- GEINITZ, H. B. Geognostisch Darstellung der Steinkohlen Formation in Sachsen. 2 vols. 4to., text and plates. Leipsig, 1856.
- GESNER, Abraham. A Treatise on Coal, Petroleum and Distilled Oils. 8vo. 181 pp. New-York, 1865.
- The Gold Fields of Nova Scotia. Vol. XIV., Pamphlets. Octavo series. 8vo. 12 pp. New-York, 1862.
- GOESSMANN, C. A. Contributions to the Chemistry of Common Salt: with particular reference to our Home Resources. Vol. XVI., Pamphlets. Octavo series. 8vo. 12 pp. 1870.
- Contributions to the Chemistry of the Mineral Springs of Onondaga, N. Y. 8vo. 22 pp. Syracuse, 1866.
- Report on the Brines of Onondaga. Vol. I., Pamphlets. Duodecimo series. 12mo. 11 pp. Syracuse, 1862.
- Report on the Salt Resources of Goderich, Province of Ontario, (Canada West.) 8vo. 18 pp. 1868.
- GRIMM, Johann. Die Lagerstätten der Nutzbaren Mineralien. 8vo. 233 pp. Prag, 1869.
- GURLT, A. Die Deutsche Steinkohle. 12mo. 51 pp. Bremen, 1868.
- GYSSER, R. Der Torf. 8vo. 46 pp. Weimar, 1864.
- HANTKEN, Maxm. v. Der Ofner Mergel. 8vo. 24 pp. Prest, 1873.
- HARTMANN, Carl. Die Mineralischen Brennstoffe Steinkohlen, Braunkohlen und Torf. 8vo. 122 pp. Halle, 1856.
- HAUY, C. A Letter to Rev. Wm. McLain on the Native Iron of Liberia; transmitting a Chemical Analysis. 8vo. 5 pp. 1855.
- HAYES, A. A. On the Native Iron of Liberia. 8vo. 7 pp. Washington, 1855.
- HITCHCOCK, Edward. Report on the Geology, Mineralogy, Botany and Zoology of Massachusetts. Part I. Economical Geology. 8vo. Amherst, 1823.
- Geology of Massachusetts. Vol. I. Economical and Scenographical Survey. 4to. Amherst, 1841.
- *and others.* Report upon the Geology of Vermont. Vol. II. Part 9. Economic Geology of Vermont. 4to. Claremont, N. H., 1861.
- HOLMES, F. S. The Phosphate Rocks of South Carolina and the Great Carolina Marl Bed. 8vo. 87 pp. Charleston, 1870.
- HUNT, T. Sterry. Mineral Statistics of the United Kingdom of Great Britain and Ireland, for the year 1858. Part I. 8vo. 190 pp. London, 1859.
- Bitumens and Pyroschists. 8vo. 15 pp.
- Contributions to the Chemical and Geological History of Bitumens and of Pyroschists or Bituminous Shales. Vol. XXV., Pamphlets. Octavo series. 8vo. 15 pp. 1863.
- Recherches sur les Eaux Minerales du Canada. vol. VIII., Pamphlets. Quarto series. 4to. 5 pp. 1841.

- HYNE, J. C. Report on the Coal Beds of the Pacific Coast Petroleum Company. 8vo. 8 pp. New-York, 1865.
- JICINSKY, Wilhelm. Das Mährisch-Schlessische-Steinkohlen-Revier bei Mährisch-Ostrau. 8vo. 132 pp.; Atlas, V. plates. Vienna, 1865.
- JOHNSTRUP, F. Om Kullagene paa Færoerne samt Analyser af de i Danmark og de nordlige Bilande forkommende Kul. 12mo. 44 pp. Copenhagen, 1873.
- Sur les Couches Carbonifères des îles Foeroe et les analyses des charbons du Danemark et des possessions danoises dans le Nord. 12mo. 4 pp., I. plate. Copenhagen, 1873.
- KIMBALL, J. P. Notes on the Iron Ores of Marquette, Michigan. 8vo. 15 pp. 1864.
- Our Mineral Interest. 8vo. 42 pp.
- Report on the Coal of the Broad Top Steam Coal Company of Pennsylvania. 8vo. 8 pp. New-York, 1867.
- Report on the Extension of the Vermont Copper Company's Copper Ore, (Gifford Tract,) Vershire, Orange Co., Vermont. 8vo. 7 pp., I. map. New-York, 1869.
- Report upon the Estate of the New-Jersey Coal Company of Wilkesbarre, Pa. 8vo. 15 pp. New-York, 1865.
- LESLEY, J. P. A Manual of Coal and its Topography. 8vo. 224 pp. Philadelphia, 1856.
- LOTTNER, F. H. Geognostische Skizze des Westfählischen Steinkohlen Gebirges. 8vo. 162 pp. Iserlohn, 1868.
- LYMAN, B. S. A Report on the Bourinot Coal Claims and Land, Cape Breton. 8vo. 17 pp. New-York, 1865.
- The Topography of the Punjaub Oil Regions. 4to. 14 pp.
- MARSH, O. C. The Gold of Nova Scotia. 8vo. 7 pp. New-Haven, 1861.
- MAYNARD, G. W. The Iron Ores of Lake Champlain, United States of America. Vol. XXIV., Pamphlets. Octavo series. 8vo. 28 pp., with a Map. Newcastle-upon-Tyne, 1874.
- MICHEL, A., and Hunt, T. Sterry. Report on the Gold Region of Canada. 8vo. 72 pp. Montreal, 1866.
- MINNESOTA: Its Resources and Progress. 8vo. 80 pp. St. Paul, 1871.
- MUNROE, Henry S. Geological Survey of Hokkaido. The Yesso Coals. 8vo. 20 pp. Tokio, 1875.
- NEWBERRY, J. S. Geological Report on the Lands of the Indian Creek and Jack's Knob Coal, Salt, Lead, Lumber, Oil and Manufacturing Company. Vol. XXXII., Pamphlets. Octavo series. 8vo. 20 pp. Cincinnati, 1866.
- Report on the Economical Geology of the Route of the Ashtabula and New-Lisbon Rail-Road. Vol. XXIV., Pamphlets. Octavo series. 8vo. 47 pp., I. Map. Cleveland, Ohio.
- Report on the Oil Lands of Crocus Creek, Cumberland County, Ky. Vol. XXXII., Pamphlets. Octavo series. 8vo. 12 pp. Cleveland, Ohio, 1865

- NEWBERRY, J. S. The Iron Resources of the United States. Reprinted from the International Review.
8vo. New-York, 1874.
- The Rock Oils of Ohio. 8vo. 16 pp. 1859.
- Report on the State House Well, Columbus, Ohio. 8vo. 11 pp. 1860.
- PONSON, A. T. Handbuch des Steinkohlen-Bergbaues. 2 vols. 4to. Weimar, 1855.
- REPORTS on the Geological Survey of the State of Missouri. Raphael Pumpelly, Director.
Vol. I. Unpublished Material of Previous Surveys, 1855–1871. Collected by G. C. Broadhead, F. B. Meek and B. F. Shumard. 8vo. 323 pp. Jefferson City, 1873.
Vol. II. Survey of 1872. Report on the Iron Ores and Coal Fields by R. Pumpelly, Adolph Schmidt and others. 8vo. 441 pp.; Atlas, IX. plates. New-York, 1873.
- RITTER, Ferdinand. Anleitung mächtige Kohlenflötze. 8vo. 95 pp. Brünn, 1868.
- SCHOOLCRAFT, H. R. The Lead Mines of Missouri, including Observations on the Geology, &c., of Missouri and Arkansas. 8vo. 299 pp. New-York, 1819.
- SCHULTZ, Carl. Mineral Spring Waters. 8vo. 70 pp. New-York, 1865.
- SILVER Mines (The) of Nevada. Vol. II., Pamphlets. Octavo series. 8vo. 76 pp., I. map. New-York, 1864.
- SMITH, J. Lawrence. Report on the Minerals and Mineral Waters of Chili. Vol. IX., Pamphlets. Octavo series. 4to. 25 pp.
- SMYTH, R. B. The Gold Fields and Mineral Districts of Victoria. 8vo. 614 pp. Melbourne, 1869.
- W. W. Catalogue of the Mineral Collections in the Museum of Practical Geology. 8vo. 190 pp. London, 1864.
- On the Mines of Wicklow and Wexford. 8vo. 64 pp., II. maps. London, 1853.
- SONORA, and the Value of its Mines. Report of the Sonora Exploring and Mining Co. Vol. II., Pamphlets. Octavo series. 8vo. 42 pp. Cincinnati, 1856.
- SOUTH Staffordshire Coal Field, (The.) *Mem. Geol. Surv. G. L.* 8vo. 241 pp. London, 1859.
- SWEET, S. H. Report on Coal to the New-York State Senate, 1865. 8vo. 88 pp. Albany.
- TAYLOR, J. E. H. The History and Description of Fossil Fuel, the Collieries and Coal Trade of Great Britain. Second edition. 8vo. 485 pp. London, 1841.
- R. C. Statistics of Coal. Second edition. Revised by S. S. Haldeman. 8vo. 640 pp. Philadelphia, 1855.
- W. B. A Communication from the State Engineer and Surveyor, transmitting a report on Coal. 8vo. 94 pp. Albany, 1865.
- VOGEL, August. Der Torf seine Natur und Bedeutung. 12mo. 170 pp. Brunswick, 1859.

- VON COTTA, Bernhard. A Treatise on Ore Deposits. Translated by Frederick Prime, Jr. 8vo. 511 pp. New-York, 1870.
- WHITE, J. H., and Silliman, B., Jr. Petroleum in California. A Brief Account of One Hundred Thousand Acres of Oil Lands in California. 8vo. 21 pp. New-York, 1865.
- WHITNEY, J. D. The Metallic Wealth of the United States. 8vo. 510 pp. Philadelphia, 1854.
- J. P. The Silver Mining Regions of Colorado. 8vo. 107 pp. New-York, 1865.
- WIBEL, Ferd. Das Gediegene Kupfer und das Rothkupfererz. (Kupferoxydul.) Ein Beitrag zur Lehre den Erzlagerstätten. 8vo. 182 pp. Hamburg, 1864.
- WOLTERS, A. Das Territorium Idaho und Seine Mineralschatze. 8vo. 8 pp. Vienna, 1873.
- WRIGHT, O. A. On the Mineral Well at Waterloo, Wis. 8vo. 2 pp.
- WURTS, Henry. Occurrence of Cobalt and Nickel in Gaston Co., N. C. Vol. XII., Pamphlets. Octavo series. 8vo. 7 pp. 1859.
- Report upon Grahamite. 8vo. 25 pp. New-York, 1865.
- Report upon a Mineral Formation in West Virginia to the Ritchie Mineral Resin and Oil Co. Vol. XV., Pamphlets. Octavo series. 8vo. 25 pp. New-York, 1865.
- ZINCKEN, C. F. Die Physiographie der Braunkohle. 8vo. 818 pp., II, plates. Hanover, 1837.
- See, also, International Exhibitions.*
Local Geology and Geognosy, p. 304.

METEOROLOGY AND TERRESTRIAL MAGNETISM.

- BACHE, A. D. Abstract of Results of a Magnetic Survey of Pennsylvania and parts of adjacent States, in 1840 and 1841, with some additional results of 1843 and 1862. Vol. V., Pamphlets. Octavo series. 8vo. 19 pp., I. map. 1863.
- Discussion of the Magnetic and Meteorological Observations made at the Girard College Observatory, Philadelphia. In two sections. *Smithsonian Contrib.* Section I., comprising parts 1, 2, 3. 4to.
- On the Diurnal Variation of the Horizontal Needle. 4to. 21 pp., III. plates. Philadelphia, 1833.
- and Courtenay, E. H. On the Relative Horizontal Intensities of Terrestrial Magnetism at several places in the United States; with the Investigation of Corrections for Temperature, and Comparisons of the Methods of Oscillation in Full and in Rarefied Air. 4to. 31 pp. 1836.
- Notes and Diagrams illustrative of the Directions of the Forces acting at and near the surface of the Earth, in different parts of the Brunswick Tornado of June 19th, 1835. 4to. 12 pp., II. diagrams. 1835.
- BARNES, J. K. General Meteorological Instructions. Vol. VI., Pamphlets. Octavo series. 8vo. Washington, 1868.
- COFFIN, James H. Psychometrical Tables for Determining the Forces of Aqueous Vapor, and the relative Humidity of the Atmosphere from Indications of the Wet and the Dry Bulb Thermometer, Fahrenheit. 8vo. 20 pp. Washington, 1856.
- DALTON, John. Meteorological Observations and Essays. Second edition. 8vo. 244 pp. Manchester, 1834.
- GENERAL Meteorological Instructions issued by the War Department, Washington, D. C. 8vo. 12 pp. Washington, 1868.
- GRETSCHEL, Heinrich. Katechismus der Meteorologie. 24mo. 168 pp. Leipsig, 1867.
- GUYOT, Arnold. Directions for Meteorological Observations and the Registry of Periodical Phenomena. *Smith. Misc. Coll.* 8vo. 70 pp. Washington, 1869.
- Tables, Meteorological and Physical, prepared for the Smithsonian Institution. Second edition. *Smith. Misc. Coll.* 8vo. 634 pp. Washington, 1870.
- HUMBOLDT, Alexander von. Fragmens de Géologie et de Climatologie Asiatique. 8vo. 2 vols. in 1. 640 pp. Paris, 1831.
- LOOMIS, Elias. The Aurora Borealis, or Polar Lights; its phenomena and laws. Vol. VI., Pamphlets. Octavo series. 8vo. 41 pp.

- LOOMIS, Elias, and Newton, H. A. On the Mean Temperature, and on the Fluctuations of Temperature, at New-Haven, Conn., Lat. $41^{\circ} 18'$ N. Long., $75^{\circ} 55'$ W. of Greenwich. Vol. VI., Pamphlets. Octavo series. 8vo. 54 pp., III. plates.
- MÜLLER, Johann. Lehrbuch der Meteorologie. Seventh edition, revised and enlarged. Vol. I. 8vo. 956 pp. Brunswick, 1868.
- Physics and Meteorology. 8vo. 573 pp. London, 1847.
- The Principles of Physics and Meteorology. 8vo. 565 pp. London, 1847.
- POUILLET, Claude S. M. Éléments de Physique Experimentale et de Meteorologie. Second edition. 4 vols. 8vo. Paris, 1832.
- Same as above. Seventh edition. 2 vols. 8vo. text; 8vo. LXIX. plates. Paris, 1856.
- Lehrbuch der Physik und Meteorologie. Fourth edition, edited by Dr. J. Muller. 2 vols. 8vo. Brunswick, 1852.
- Same as above. Fifth edition. 2 vols. 8vo. Brunswick, 1858.
- Same as above. Seventh edition, edited by Dr. J. Muller. Vol. I. 8vo. 961 pp. Brunswick, 1868.
- SMITHSONIAN Institution Publications:
- Directions for Constructing Lightning Rods. 8vo. 4 pp. Washington, 1874.
- Directions for Meteorological Observations and the Registry of Periodical Phenomena. *Smith Misc. Coll.* 8vo. 70 pp. Washington, 1860.
- Instructions for Observations of Thunder Storms. A circular. Washington, 1874.
- Telegraphic Announcement of Astronomical Discoveries. *Smith. Misc. Coll.* Circular. 8vo. Washington, 1873.
- Queries Relative to Tornadoes. A circular. 8vo. Washington.
- UNITED STATES Coast Survey. Appendix to Report for 1872.
- Schott, C. A. Notes on Measurements of Terrestrial Magnetism. 4to. 22 pp.
- Geological Survey of the Territories. Miscellaneous Publications. No. 2. Gannett, Henry. Meteorological Observations during the year 1872 in Utah, Idaho and Montana. 8vo. 120 pp. Washington, 1873.
- Signal Office, Washington, D. C. A Complete Set of the Blanks used with the Recording Instruments of the U. S. Signal Office at Washington, D. C.
- WHITNEY, J. D. The Geological Survey of the State of California. Miscellaneous Publications of the Survey. Contributions to Barometric Hypsometry; with tables for use in California. 4to. 88 pp. 1874.

ZOOLOGY AND ANIMAL PHYSIOLOGY.

- AGASSIZ, Louis. Anatomie des Echinodermes. Première Monographie. Anatomie du Genre Echinus, par G. Valentin. 125 pp. text; Atlas folio, IX. plates. 4to. Neuchatel, 1841-42.
- Contributions to the Natural History of the Acalephæ of North America:
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 Part II. On the Beroid Medusæ of the Shores of Massachusetts in their Perfect State of Development. 62 pp., VIII. plates. 4to. 1849.
- Memoire sur les Moules de Mollusques vivans et fossiles. Première Partie. Moules D'Acephales Vivans. 4to. 48 pp., IV. plates. Neuchatel, 1849.
- Methods of Study in Natural History. 8vo. 319 pp. Boston, 1866.
- Monographies D'Echinodermes vivans et fossiles. Echinites. Famille des Cidarides. Première Monographie—Des Salénies. 32 pp., V. plates.
- Famille des Clypéastroides. Seconde Monographie—Des Scutelles. 151 pp., XXVII. plates.
 Troisième Monographie—Des Galérites, par Ed. Desor. 94 pp., XIII. plates.
 Quatrième Monographie—Des Dysasters, par Ed. Desor. 29 pp., IV. plates.
- Nomenclator Zoologicus continens Nomina Systematica Generum Animalium tam Viventium quam Fossilium. 3 vols. 4to. Soloduri, 1842-1847.
- Notice of a Collection of Fishes from the Southern Bend of the Tennessee River, Alabama. 8vo. 31 pp. 1854.
- On the Ichthyological Fauna of the Pacific Slope of North America. 8vo. 46 pp. New-Haven, 1855.
- On the Principles of Classification in the Animal Kingdom. On the Structure of the Halcyonoid Polypi; On the Morphology of the Medusæ. 8vo. 19 pp. Charleston, S. C., 1850.
- The Primitive Diversity and Number of Animals in Geological Times. 8vo. 10 pp. New-Haven, 1854.
- et Vogt, C. Histoire Naturelle des Poissons D'Eau Douce de L'Europe Centrale. 8vo. 326 pp.; Atlas, LV. plates. Neuchatel, 1842.
- ALLEN, H. Monograph of North American Bats. 8vo. 85 pp.
- BAIRD, Spencer F. Catalogue of North American Birds. 8vo. 32 pp. Washington, 1859.

- BAIRD, Spencer F. Review of American Birds in the Museum of the Smithsonian Institution. Part I. 8vo. 478 pp. 1864-1872.
- S. F., and Girard, C. Catalogue of North American Reptiles. Part I., Serpents. 8vo. 172 pp. Washington, 1853.
- BERNSTEIN, H. A. Beiträge zur Nühren Kenntniss der Gattung *Collocalia* Gr. (*Cypselus Esculentus* et *Nidificus*.) 4to. 1856.
- BINNEY, W. G. Bibliography of North American Conchology previous to 1860. *Smith. Misc. Coll.* Part 1. American Authors. 650 pp. 1863. Part 2. Foreign Authors. 306 pp. 1864. 8vo. Washington.
- and Bland, T. Land and Fresh Water Shells of North America. Part I. Pulmonata Geophila. 316 pp., 1869. Part II. Pulmonata Limnophila. 120 pp., 1865. 8vo. Washington.
- BLAND, T. Remarks on the Distribution of the Inoperculated Land Shells which inhabit the continent of America and the West Indies. Vol. XXVI., Pamphlets. Octavo series. 8vo.
- Remarks on the Origin and Distribution of the Opereculated Land Shells which inhabit the Continent of America and the West Indies, with a Catalogue of the American species. Vol. XXVI., Pamphlets. Octavo series. 8vo. 20 pp. 1866.
- CARPENTER, Philip B. The Mollusks of Western North America. Embracing the Second Report made to the British Association on this subject, with other papers; reprinted by permission, with a general index. 8vo. Washington, 1872.
- William B. Principles of Comparative Physiology. From the Fourth London edition. 8vo. 752 pp. Philadelphia, 1854.
- CUVIER, G. Le Règne Animal. 5 vols. 12mo. Paris, 1829.
- DALL, W. H. On a New Subfamily of Fluviatile Mollusca. Vol. XXVI., Pamphlets. Octavo series. 3 pp. 1866.
- Note on *Octopus punctatus*, Gabb. 3 pp. 1866.
- DEWEY, Chester, and others.
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- GEOGRAPHICAL and Geological Explorations and Surveys West of the One Hundredth Meridian. Yarrow, H. C., and Henshaw, H. W. Report upon and List of Birds collected in 1872. 8vo. 148 pp. 1874.
- GILL, Theodore. Arrangement of the Families of Fishes, or Classes Pisces, Marsipobranchii, and Leptocardi. Prepared for the Smithsonian Institution. 8vo. 48 pp. Washington, 1872.
- Arrangement of the Families of Mammals, with Analytical Tables. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* 8vo. 98 pp. Washington, 1872.
- Arrangement of the Families of Mollusks. Prepared for the Smithsonian Institution. 8vo. 49 pp. Washington, 1871.

- HISTOIRE Naturelle de Jura et des Departments Voisins. Tome III. Ogérien, Le Frere. Zoologie Vivante. 8vo. Paris, 1867.
- JAEGER, George. Osteologische Bemerkungen. Vol. VI., Pamphlets. Quarto series. 4to. 44 pp., III. plates. 1855.
- JULIEN, Alexis A. On two Varieties of Sponge Spicules. Vol. XXVI., Pamphlets. Octavo series. 8vo. 7 pp. 1865.
- LEA, Carpenter, Stimpson, Binney and Prime. Check Lists of the Shells of North America. 8vo. Washington, 1860.
- LECONTE, John L. Classification of the Coleoptera of North America. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Parts 1 and 2. 8vo. 348 pp. 1861-1873.
- New Species of North America Coleoptera. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Parts 1 and 2. 8vo. 240 pp. Washington, 1863-1873.
- LEUCKART, F. S. Allgemeine Einleitung zur Naturgeschichte der drei Reiche. 12mo. 130 pp. Stuttgart, 1832.
- LOEW, H. Monographs of the Diptera of North America. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* Parts 2 and 3. 8vo. 360 pp., XIII. plates. Washington, 1864-1873.
- LOGAN, W. E. On New Specimens of Eozoon. 12mo. 5 pp. 1867.
- The same as above. 12mo. 12 pp., II. plates. 1867.
- and others. On the History of Eozoon Canadense. Vol. XX., Pamphlets. Octavo series. 8vo. 39 pp.
- MAYER, Karl. Zur Anatomie des *Rhinoceros Indicus*. Vol. VI., Pamphlets. Quarto series. 4to. 14 pp., IV. plates, 1852.
- MELSHEIMER, Friederich Ernest. Catalogue of the described *Coleoptera* of the United States. Revised by S. S. Haldeman and J. L. Leconte. 8vo. 174 pp. Washington, 1853.
- MILNE, Edwards M. Manual of Zoology. Translated from the French by R. Knox. Second edition. 12mo. 564 pp. London, 1863.
- MORRIS, J. G. Catalogue and Synopsis of the Lepidoptera of North America. Part 1. 8vo. 453 pp. 1860-1862.
- Catalogue of the Described Lepidoptera of North America. Part 1. Diurnal and Crepuscular. 8vo. 354 pp. 1860.
- MURRAY, Andrew. The Geographical Distribution of Mammals. 4to. 420 pp. London, 1866.
- MUSEUM of Comparative Zoology at Harvard College. Annual Report of the Trustees, together with the Report of the Director. 8vo. 22 pp. Boston, 1868.
- NATURAL History of the State of New-York. Reports on the Introduction. 188 pp.
- Part I. Zoology. De Kay, James E.
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- Div. 6. Crustacea. { (Vol. 4.) } 70 pp., XIII. plates. 1843.

- OESTEN SACKEN, R. Catalogue of the described Diptera of North America. Prepared for the Smithsonian Institution. *Smith. Misc. Coll.* 8vo. 221 pp. Washington, 1838.
- Monographs of the Diptera of North America. Prepared for the Smithsonian Institute. Part IV. *Smith. Misc. Coll.* 8vo. 344 pp. Washington, 1869.
- OWEN, Richard. The Principal Forms of the Skeleton and the Teeth. 12mo. 329 pp. Philadelphia, 1854.
- PACKARD, A. S., Jr. Directions for Collecting and Preserving Insects. Prepared for the Smithsonian Institute. *Smith. Misc. Coll.* 8vo. 54 pp. Washington, 1873.
- PRIME, Temple. Monograph of American *Corbiculadæ*. *Smith. Misc. Coll.* 8vo. 80 pp. Washington, 1865.
- SANDBERGER, Fridolin. Die Land-und Süßwasser-Conchylien der Vorwelt. Lieferungs I. to X., text and plates. 4to. Wiesbaden, 1870-1873.
- SAY, Thomas. A Description of the Insects of North America. Edited by J. L. Le Conte, with a Memoir of the Author by George Ord. 2 vols. 8vo. New-York, 1869.
- SCUDDER, S. H. Catalogue of North American *Orthoptera*, described previous to 1867. 8vo. 89 pp. Washington, 1868.
- SMITHSONIAN Institution Publications:
- Queries Relative to the Food Fishes of the United States. A circular. 8vo. Washington.
- STIMPSON, Wm. Researches upon *Hydrobiinæ*. *Smith. Misc. Coll.* 8vo. 59 pp. Washington, 1865.
- UNITED STATES and Mexican Boundary Survey. Reports.
- Part II. Subdivision 2. Zoology. Mammals by S. F. Baird. Birds by S. F. Baird. Reptiles by S. F. Baird. Fishes by C. Girard.
- Part III. Mammals of the Boundary by S. F. Baird. 2 vols. 4to. Washington, 1859.
- UNITED STATES Geological Survey of the Territories. Final Reports. Quarto series.
- Vol. V. Thomas, Cyrus. Zoology and Botany. Part I. Synopsis of the Acridadæ of North America. 8vo. 253 pp., I. plate. Washington, 1873.
- VOIGT, F. S. Lehrbuch der Zoologie. "Heidelberger Naturgeschichte." 6 vols. 8vo. Stuttgart, 1835.
- VON WIED, Prinz Max. Ueber die Selbstständigkeit der Species des *Ursus Ferox*, Desm, mit Anatomischen Bemerkungen von Dr. C. Mayer. 4to. 51 pp., III. plates. 1856.
- WHITNEY, J. D. The Geological Survey of the State of California. Reports of the Survey.
- Ornithology. Vol. I. Land Birds. Edited by S. F. Baird, from the manuscript and notes of J. G. Cooper. 8vo. 592 pp. Cambridge, 1870.

CIVIL ENGINEERING.

- ABERT, J. J. Report in reference to the Canal to connect the Chesapeake and the Ohio Canal with the City of Baltimore. 4to. 40 pp., I. diagram. Washington, 1838.
- S. T. Is a Ship Canal Practicable? Notes, Historical and Statistical, upon the Projected Routes for an Interoceanic Ship Canal, between the Atlantic and Pacific Oceans; in which is included a Short Account of the Character and Influence of the Canal of Suez, and the Probable Effects upon the Commerce of the World of the Two Canals, regarded either as Rivals, or as parts of one System of Interoceanic Navigation. Vol. XXX., Pamphlets. Octavo series. 8vo. 88 pp., V. maps. Cincinnati, 1872.
- ADHÉMAR, J. *Traité de Charpente*. Troisième édition. 8vo. 512 pp. text; Atlas folio, LXVII. plates. Paris, 1861.
- AUBINEAU. *Traité Complet et Pratique de la Construction des Escaliers*. Atlas, XXX. plates. 12mo. 90 pp. Paris.
- BARLOW, Peter. *A Treatise on the Strength of Materials*. With several appendices. The whole arranged by William Humber. 8vo. 396 pp., XVI. plates. London, 1867.
- BECKWITH, S. F. and A. Reports on Béton—Coignet, Asphalt and Bitumen. 8vo. 52 pp. Washington, 1868.
- BELIDOR, B. F. de. *La Science des Ingenieurs dans la Conduite des Travaux de Fortification et d'Architecture Civile*. 4to. 6 vols. bound in one. Paris, 1729.
- BLAKE, William P. Report on Civil Engineering and Public Works of the Paris Exposition. 8vo. 49 pp. Washington, 1870.
- BLENKARN, J. *Practical Architectural and Engineering Specifications*. 8vo. 416 pp. London, 1865.
- BRUSSE, M. *Cours de Mécanique Appliquée professé à l'École des Ponts et Chaussées*. Première Partie—Résistance des Matériaux et Stabilité des Constructions. 8vo. Paris, 1859.
- *Recherches Analytiques sur la Flexion et la Résistance des Pièces Courbes*. 4to. 269 pp. Paris, 1854.
- BURN, R. S. *The New Guide to Carpentry*. General Framing, and Joinery, Theoretical and Practical. 4to. 364 pp., CLI. plates. Edinburgh, 1870.
- CLARKE, Reeves & Co. *Second Illustrated Album of Designs of the Phoenixville Bridge Works*. 4to. 25 pp., XV. plates. Philadelphia, 1873.
- CRESCEY, Edward. *Encyclopedia of Civil Engineering, Historical, Theoretical and Practical*. 8vo. 1752 pp. London, 1856.

- DAY, H. H. Statement relative to experiments made at Bloomingdale, N. J., in Compressing Air and in the Transmitting and use of it through Two Miles of Pipe, in the Summer and Fall of 1870. Vol. VI., Pamphlets. Octavo series.
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- DEARBORN, W. L. Experiments for Making Brick Masonry Impervious to Water. Vol. IV., Pamphlets. Octavo series.
8vo. 6 pp. 1870.
- DEJARDIN. Routine de l'Établissement des Voutes.
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- DELAISTRE, J. R. La Science de l'Ingénieur, divisée en Trois Parties ou l'on traite des Chemins, des Ponts, des Canaux et des Aqueducs. 2 vols. 4to. text, LXI. plates. Lyons, 1835.
- ÉCOLE Impériale des Ponts et Chaussées. Paris.
—— Catalogue des Galeries de L'École des Ponts et Chaussées.
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—— Catalogue des Livres composant la Bibliothèque de l'.
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- HASKOLL, W. D. The Engineers', Mining Surveyors' and Contractor's Field Book. 8vo. 189 pp. London, 1866.
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- HAUPT, Hermann. The General Theory of Bridge Construction.
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- HOOSIC Tunnel—Photographs of the. 2 views.

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- JOHNSON, William. The Practical Draughtsman's Book of Industrial Design, and Machinists' and Engineers' Drawing Companion. 4to. 200 pp., LV. plates. Philadelphia, 1871.
- KEYSTONE Bridge Company's Illustrated Album, embracing Iron Bridges, Roofs, Columns, Chord Links and Shapes, with Description of Long-Span Bridges, Quality of Materials and Principles of Construction. 4to. 42 pp., II. plates. St. Louis, 1874.
- KIRKALDY, David. Results of an Experimental Inquiry into the Tensile Strength and other Properties of various kinds of Wrought Iron and Steel. 8vo. 227 pp. London, 1866.
- LACROIX, Eugene. Bibliographie des Ingénieurs, des Architectes des Chefs D'Usines Industrielles des Élèves des Écoles Polytechniques et Professionnelles et de Agriculteurs. 3 vols. 4to. Paris, 1857-1865.
- LEJUSTE, L. Guide des Architectes, Verificateurs, Entrepreneurs et de Toutes les Personnes qui font Bâtir, ou Traité Complet de L'Evaluation des Ouvrages de Construction. 4to. 439 pp. Paris, 1848.
- MAHAN, D. H. An Elementary Course of Civil Engineering. 8vo. 428 pp. New-York, 1869.
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- MCCLELLAN, George B., and others. Report of the Board of Engineers on the Subject of Rapid Transit through New-York. Vol. XXX., Pamphlets. Octavo series. 8vo. 5 pp., II. plans. New-York, 1870.
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- PASLEY, C. W. Observations on Lime, Calcareous Cements, Mortars, Stuccos and Concrete. 12mo. 208 pp. London, 1847.
- PECKHAM, S. F. On Asphalt. Vol. XXIV., Pamphlets. Octavo series. 8vo. 22 pp. Providence, 1868.
- PROFESSIONAL Papers of the Corps of Royal Engineers. Vols. I. to X. 4to. London, 1837-1849.
- PRUD'HOMME, L. Cours Pratique de Construction. 2 vols. 8vo. Paris, 1870.

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- RANKINE, William J. M. A Manual of Civil Engineering.
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- SACKEN, E. F. v. Katechismus der Baustyle.
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- THURSTON, R. H. On the Molecular Changes Produced in Iron by Variations of Temperature. *Reprinted from the Iron Age.*
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- The same as above. Fifth edition. Corrected and enlarged, with an Appendix, by Peter Barlow.
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- TROWBRIDGE, W. P. Proposed Plan for Building a Bridge across the East River, at Blackwell's Island. Vol. X., Pamphlets. Quarto series.
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- Theory of the Strength of Materials, illustrated by Applications to Machines and Buildings.
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- WARE, W. R. An Outline of a Course of Architectural Instruction. Vol. XXX., Pamphlets. Octavo series.
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- WOOD, De Volson. A Treatise on the Resistance of Materials, and an Appendix on the Preservation of Timber.
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Sixth Series. Mémoires. Vols. I. to XX., 1862 to 1871.

Administration. Vols. I. to X., 1862 to 1871.

Seventh Series. Mémoires. Vols. I. to VII., 1872 to 1875.

ANNALES du Genie Civil, et Recueil de Mémoires sur les Ponts et Chaussées, les Routes et Chemins de Fer, les Constructions et la Navigation Maritime et Fluviale, l'Architecture, les Mines, la Metallurgie, la Chimie, la Physique, les Arts Mecaniques, l'Économie Industrielle, le Genie Rural. Publiées par E. Lacroix et des autres.

First Series. Vols. I. to VII., (text and plates,) 1862 to 1868.

Second Series. Vols. XVI., (text and plates,) 1867; XVII., 1870 to 1871.

ANNALES des Travaux Publics de Belgique.

Vols. XI. to XXVII., (atlas to accompany Vol. XV.,) 1852 to 1869.

ANNUAL Report of the Chief of Engineers for the years 1873, 1874, (Vols. 1, 2.) Brig. Gen. A. A. Humphreys.

3 vols. 8vo. Washington.

Appendix R. to Report for 1874. Reports upon Fort Saint Philip Canal and Construction of Jetties for the Mouths of the Mississippi. 8vo.

ANNUAL Report of the Croton Aqueduct Department, made to the Common Council of the City of New-York.

Twentieth and Twenty-First Reports for the years 1867 and 1868. 2 vols. 8vo. New-York, 1868, 1869.

ANNUAL Report of the Secretary of the American Iron and Steel Association, for the year 1874. 8vo. Philadelphia.

ANNUAL Report of the State Engineer and Surveyor on the Railroad Statistics of the State of New-York for the years 1853, 1863. 2 vols. 8vo. Albany.

ANNUAL Report of the Surveyor-General of the State of Nevada for the years 1865, 1866.

2 vols. 8vo. Carson City, 1866, 1867.

ARCHIV für Bergbau und Hüttenwesen.

Vols. I. to XX., 1820 to 1831.

BERG und Huttenmännisches Zeitung.

Vols. I. to XXXIV., 1842 to 1874. (Lacking Vols. XVIII. and XXIII.) Vol. XXXV., 1875. No. 1, January 1, to No. 27, July 2.

BULLETIN de la Société de l'Industrie Minerale.

First Series. Vols. I. to IV.; VIII. to XV., 1855 to 1870.

Second Series. Vols. I. to IV., 1870 to 1874.

BULLETIN du Musée de L'Industrie de Belgique.

Vols. I. to LXVI., 1841 to 1874; Vol. LXVII., 1875, January to June.

BULLETIN of the American Iron and Steel Association.

Vols. I. to VIII., 1866 to 1874; Vol. IX., 1875, January to June. 9 vols. 4to. Philadelphia.

DER BERG-GEIST Zeitung für Berg-Hüttenwesen und Industrie.

Vols. XVIII., XIX., 1873, 1874; Vol. XX., 1875, No. 1, January 1, to No. 53, July 2.

DER BERGWERKS-BETRIEB in den Reichsrathe Vertretenen Königreichen und Ländern der Oesterreichisch-Ungarischen Monarchie, 1870. 8vo. 299 pp. Vienna, 1871.

DIE BAULICHEN Anlagen auf der Berg-Hütten-und Salinenwesen in Preussen.

Vols. I., II., III., 1861, 1862, 1863.

Berlin.

DER BERGWERKSFREUND. Vols. I. to XIX., 1839 to 1856.
Eisleben.

ENGINEERING: An Illustrated Weekly Journal.
Vols. V. to XIX., January, 1868, to June, 1875. London.

THE ENGINEERING and Mining Journal.
Vols. VIII. to XIX., January, 1869, to June, 1875.

ERFAHRUNGEN im Berg-und Hüttenmannischen Maschinen, Bau-und
Aufbereitungswesen.

Edited by P. RITTENGER. 4to. One vol., text and plates, a year. Vienna.

1854, text and plates. 1855, plates. 1856 to 1866, text and
plates. 1867, plates. 1868 to 1870, text and plates. 1872,
text and plates. 1873, plates.

IRON. The Journal of Science, Metals and Manufactures. With
which is incorporated the Mechanics' Magazine, established
1853.

Vols. I. to IV., 1873, 1874. Vol. V., 1875, Jan. 2, to June 26.

THE IRON AGE. A Review of the Hardware and Metal Trades.
Vols. IV. to IX.; XI. to XIV., 1867 to 1874. Vol. XV.,
1875, January 2, to June 26.

JAHRBUCH der K. K. Bergakademien Leoben und Schemnitz und
der K. K. Montan-Lehranstalt Příbram.

Vol. XV., 1865. Edited by P. Ritter von Tunner.

8vo. Vienna.

JAHRESBERICHT über die Beobachtungen, Versuche, und neuen
Einführungen der K. K. Montan-Beamten auf dem Ge-
biethe des Berg-und Hüttenmännischen-Maschinen-und
bauwesens.

1851, text; 1852, text and plates.

JOURNAL des Mines.

Vols. I. to XXXVIII., 1794 to 1815.

JOURNAL of the Franklin Institute of the State of Pennsylvania,
and Mechanics' Register.

Second Series: Vols. XV. to XVIII.; XX., XXI., XXII.;
XXIV.—1835 to 1840.

Third Series: Vols. I., II., III., VI., VIII.; and LIII. to
LXIX.—1841 to 1875.

KALENDER für den Oberschlessischen Bergmann.

Vols. I., II., 1845.

Tarnowitz.

KALENDER für den Sächsischen Berg-und Hüttenmann.

1827 to 1851. Index for the years 1827 to 1840. Continued
under the title:

JAHRBUCH FÜR DEN BERG-UND HÜTTEN-MANN. 1852 to 1869.
Continued under the title:

JAHRBUCH FÜR DEN BERG-UND HÜTTENWESEN IM KÖNIG-
reiche Sachsen. 1870 to 1875.

LE GENIE Industriel. Vols. XXIII. to XXIV., 1862 to 1867.

- LES HOUILLIERES. 1867, 1868, 1869, 1872, text and plates.
4to. Paris.
- THE MANUFACTURER and Builder.
Vols. I. to V., 1869 to 1874. Vol. VI., 1875, January to June.
- THE MINING and Scientific Press.
Vols. XI., XII., XIII.; XVI. to XIX.; XXI., XXIII., XXV., XXVI., XXVII., XXIX., 1865 to 1874. Vol. XXX., 1875, January 1, to June 26.
- THE MINING and Smelting Magazine.
Vols. I. to VI., 1862 to 1864. Vol. VII., 1865, January, February and March Nos.
- THE MINING Magazine: Devoted to Mines, Mining Operations, Metallurgy, &c., &c.
Vols. I. to X., 1853 to 1858. *Publication discontinued.*
- MONTHLY Report of the Director of the Bureau of Statistics, July, 1867, to June, 1875. 8 vols. 4to. Washington.
- NOTIZEN zur Sammlung von Zeichnungen für die Hütte.
1857; 1860 to 1868. Berlin.
- OBERSCHLESISCHEN Taschenbuch und Kalender.
1844, 1845. 2 vols. 12mo. Tarnowitz.
- OESTERREICHISCHES Montan-Handbuch.
8vo. 258 pp. Vienna, 1875.
- OESTERREICHISCHES Zeitschrift für Berg-und Huettenwesen.
Jahrgang I. to XXII., 1853 to 1874; XXIII., 1875, January 2, to June 26.
- PROCEEDINGS of the 18th Annual Meeting of the Board of Supervising Inspectors of Steam Vessels, January, 1870.
8vo. 268 pp. Washington, 1870.
- THE RAILWAY World. Vol. I., 1875, No. 21. Philadelphia.
- REPERTORIUM Commentationum a Societatibus Litterariis Editarum. Secundum Disciplinarum Ordinem digessit I. D. Reuss.
(A collection of the Transactions of Philosophical Societies from the earliest times to the date of publication.)
16 vols. 4to. Gottingen, 1801-1821.
Vol. VII. Mathesis; Mechanica; Hydrostatica; Hydraulica; Hydrotechnia; Aerostatica; Pneumatica; Technologia; Architectura Civilis; Scientia Naturalis; Scientia Militaris.
- REVUE Universelle des Mines, de la Metallurgie, des Travaux Publics, des Sciences et des Arts Appliqués l'Industrie.
Vols. I. to XXXVII., 1857 to 1875. Paris.
- SÄCHSISCHE Bergwerks-Zeitung. 1852, 1853, 1854. Freiberg.
- THE TECHNOLOGIST, or Industrial Monthly, especially devoted to Engineering, Manufacturing and Building.
Vols. I., II., 1870, 1871. Continued under the title:
THE INDUSTRIAL MONTHLY. Vols. III., IV., 1872, 1873.

- TRANSACTIONS of the American Institute for the years 1863 to 1871.
9 vols. 8vo. New-York.
- TRANSACTIONS of the American Institute of Mining Engineers.
Vol. I, May, 1871, to February, 1873; Vol. II., 1873, to
February, 1874. 2 vols. 8vo. Philadelphia.
- TRANSACTIONS of the Institution of Civil Engineers.
Vols. I, II, III., 1837 to 1842. London.
- UNITED States Rail-Road and Mining Register.
Vols. XVI. to XIX., 1871 to 1874.
- VAN NOSTRAND'S Eclectic Engineering Magazine.
Vols. I to XII., 1869 to 1875.
- ZEITSCHRIFT des Vereins Deutschen Ingenieure.
Vols. XI. to XVIII., 1867 to 1874; Vol. XIX., 1875, Janu-
ary to June.
- ZEITSCHRIFT für das Berg-Hütten u. Salinen-Wesen in dem Preuss-
ischen Staate, herausgegeben in dem Ministerium für Handel,
Gewerbe und Öffentliche Arbeiten.
Vols. I. to XXII., 1854 to 1874. Vol. XXIII., 1875, Janu-
ary to June.

HYDRAULIC ENGINEERING AND MARITIME WORKS.

- ABBOTT, John. Exposition of the Principles of Abbott's Hydraulic Engine. 8vo. 132 pp. Boston, 1835.
- AMELUNG, J. A. Abhandlung über der Wasserbau an den Schiffbaren Flüssen des Groszherzogthums Hessen als Beiträge zur Wasserbaukunde. 8vo. 222 pp. Darmstadt, 1845.
- ARMENGAUD, Sr. Traité des Moteurs Hydrauliques. 2 vols. 4 to. text; Atlas, XXI. plates. Paris, 1858.
- BENET, S. V. Electro-Ballistic Machines, and the Schultz Chronoscope. 4to. 47 pp. New-York, 1866.
- Box, Thomas. A Practical Treatise on Mill-Gearing, Wheels, Shafts, Riggers, &c., for the use of students. 8vo. 84 pp. London, 1869.
- BRITISH Patent Office. Abridgments of Specifications of Patents relating to
- Drain Tiles and Pipes. 50 pp. 1857.
- Hydraulic Crane. W. G. Sanderson, Patentee. 7 pp., II. plates. 1856.
- Hydraulic Hoisting Machines. W. G. Armstrong, Patentee. 6 pp., II. plates. 1856.
- BROOKLYN Water Works and Sewers, (The.) A Descriptive Memoir. 2to. 160 pp., LIX. plates. New-York, 1867.
- BRUSSE. Cours de Mecanique-Appiquée, professé a L'École des Ponts et Chaussées. Deuxième Partie—Hydraulique. 8vo. Paris, 1860.
- CHATONEY et Rivot. Considération sur les Materiaux employés dans les Constructions à la mer. 8vo. 193 pp. Paris, 1856.
- DALMAN, J. Ueber Stromcorrectioner im Fluthgebiet. 4to. 104 pp. Hamburg, 1856.
- DAMMERT, E. A. Das Deich und Strombau-Recht. 2 vols. in one. 8vo. Hannover, 1816.
- DIVING Bell (The Improved) of the Pacific Submarine Exploring Company. 12mo. 12 pp. New-York, 1869.
- DUMREICHER, A. Gesamtüberblick über die Wasserwirtschaft des Nordwestlichen Oberharzes. 8vo. 87 pp. Clausthal, 1868.
- ELLIOT, George H. Report of a Tour of Inspection of European Light-House Establishments, made in 1873, under the authority of Hon. William A. Richardson, Secretary of the Treasury. 8vo. 288 pp. Washington, 1874.
- ENGELBREIT, K. Die Instrumente der höheren und niederen Geodäsie und der Hydrometrie. 2 vols., text and plates. Nurnberg, 1852.

- FOLSCH, A. Die Stadt Wasserkunst in Hamburg.
8vo. 83 pp. Hamburg, 1851.
- FRANCIS, James B. Lowell Hydraulic Experiments.
4to. 251 pp., XXIII. plates. New-York, 1868.
- GILLIES, John R. Tunnels of the Pacific Rail-Road. Vol. IV., Pamphlets.
Octavo series. 8vo. 19 pp., I. map. 1870.
- GOTH, Georg. Vordernberg in der neusten zeit oder geschichtliche
Darstellung der Vereinigung der Radgewerker.
8vo. 252 pp. Vienna, 1839.
- GUINOTTE, Lucien. Étude Générale sur la Detente Variable et
spécialement sur son application aux Machines à Vapeur.
8vo. 12 pp. Liege, 1872.
- HAMM, Wilhelm. Katechismus der Drainirung.
24mo. 88 pp. Leipsig, 1858.
- HÖRMANN, A. Die Neuen Wasserhaltungs-Maschinen auf den
Dechenschächter bei Saarbrücken, der Tiefbau anlage zu
Rüdersdorf und der Ferdinandsgrube bei Kattowitz.
2 vols. 4to. text and plates. Berlin, 1874.
- HUBBE, H. Reisebemerkungen, hydrotechnischen Inhalts.
4to. 64 pp., XIII. plates. Hamburg, 1844.
- HUMPHREYS, A. A., and Abbot, H. L. Report upon the Physics
and Hydraulics of the Mississippi River.
4to. 602 pp., XX. plates. Philadelphia, 1861.
- HUNRICHS, J. W. A. Practische Anleitung zum Deich-Siel-und
Schlengen-Bau. 2 vols. 12mo. Bremen, 1770.
- KIRKWOOD, J. P. Report Descriptive of the Construction of the
Brooklyn Water Works and Sewers.
4to. 160 pp. New-York, 1867.
- KRAFT, J. Roue Hydraulic à Aubes Courbés.
4to. 47 pp., III. plates. Paris, 1859.
- KREPP, F. C. The Sewage Question. 8vo. 208 pp. London 1867.
- MASON, E. D. Characteristics of the Missouri River, and the Means
used for Directing and Controlling its Channel at St. Jo-
seph, Mo.
Report of a Preliminary Survey of the Missouri River in the
vicinity of St. Joseph.
2 Pamphlets. 10, 25 pp. St. Joseph, 1872.
- MILLS, H. F. The Swain Turbine Water-Wheel.
8vo. 51 pp. Lowell, 1871.
- MORIN, Arthur. Mecanique Pratique. Hydraulique.
8vo. 638 pp., VII. plates. Paris, 1865.
- PONCELET, J. V., and Lesbros. Experiences Hydrauliques sur les
Lois de L'Ecoulement de L'Eau.
4to. 262 pp., VIII. plates. Paris, 1832.
- REDTENBACHER. Theorie und Bau der Turbinen.
4to. 183 pp., XXI. plates. Mannheim, 1860.
- Theorie und Bau der Wasser-Räder.
4to. 264 pp. Mannheim, 1858.
- REPORT of Commissioners relative to Encroachments and Pre-
servation of the Harbor of New-York. Transmitted to the
Legislature January 8, 1856.
8vo. 316 pp., VII. diagrams. New-York, 1864.

- SCHOTTER, Hermann. Über die Rationelle Benutzung der Wasser-Kräfte vermittelt eines neuen apparatus zur transmission der selben. 8vo. 28 pp., I. plate. Gera, 1873.
- SEBILLOTTE, L. A. Bassins de Radoub de Marseille. Notice sur L'Exécution des Travaux. 4to. 204 pp.; Atlas, 2to., XL. plates. Marseilles, 1873.
- SWAIN Turbine Water-Wheel, (The.) An Illustrated Description of the Apparatus; Tables of Data and Results of Tests made at Lowell, Mass., in 1869, 1870. Vol. XXX., Pamphlets. Octavo series. 8vo. 51 pp. Lowell, 1871.
- UNION Stone Co. The Union Emery Wheel, Solid and with Stone Centre. 12mo. New-York, 1872.
- UNITED STATES Light House Board. A Series of thirty pamphlets, 8vo. and 4to., and ninety plates, 2to., descriptive and illustrative of the U. S. Light House System; including Plan of Organization, Description of Apparatus, List and Location of Light Houses, Instructions to Keepers, &c. Washington, 1871.
- VON BREMEN, L. & Co. Taucher-Apparate. 12mo. Kiel, 1873.
- WARREN, G. K. Report and Plan for the Reclamation of the Basin of the Mississippi River Subject to Inundation, by the Board of Commissioners appointed under Act of Congress, approved June 22, 1874. 8vo. 160 pp., IV. plans. Washington, 1873.
- WASHINGTON Aqueduct. Plans and Specifications for. 8vo. Washington, 1871.
- Portfolio of XVII. plates to illustrate.
- WEISBACH, Julius. Die Experimental Hydraulik. 8vo. 281 pp. Freiberg, 1855.
- WIGHAM, J. R. A New Method of Illuminating Light Houses. 8vo. 8 pp. Dublin, 1865.
- WOLTMAN, R. Beiträge zur Hydraulischen Architectur. 4 vols. 8vo. Gottingen, 1791.
- Beiträge zur Schiffbahrmachung der Flüsse. 4to. 334 pp., VII. plates. Hamburg, 1826.
- See, also, International Exhibitions, p. 381.
Periodical Publications, p. 351.*

MECHANICAL ENGINEERING.

- AMATEUR Mechanic's Workshop, (The.) 8vo. 148 pp. London, 1870.
- APPLETON, D. & Co.'s Dictionary of Machines, Mechanics, Engine Work and Engineering. 2 vols. 8vo. New-York, 1852.
- ARMENGAUD, Sr. The Practical Draughtman's Book of Industrial Design, and Machinist's and Engineer's Course of Mechanical Engineering and Architectural Drawing. 4to. 200 pp., LV. plates. Philadelphia, 1870.
- BARNARD, F. A. P. Report on Machinery and Processes of the Industrial Arts and Apparatus of the Exact Sciences. Paris Universal Exposition, 1867. 8vo. 669 pp., VII. plates. New-York, 1869.
- Box, Thomas. A Practical Treatise on Mill-Gearing, Wheels, Shafts, Riggers, &c., for the use of students. 8vo. 84 pp. London, 1869.
- BRITISH Patent Office. Specifications of Patents relating to—
 ——— Power Hammers. W. Naylor, Patentee. 10 pp., II. plates. 1854.
 ——— Power Hammers and Riveting Machines. W. Naylor, Patentee. 11 pp., III. plates. 1856.
 ——— Steam Windlass, &c. R. A. Brooman, Patentee. 6 pp., I. plate. 1857.
- BRUSSE. Cours de Mécanique Appliquée, professé à L'École des Ponts et Chaussées. 8vo. Paris, 1860.
- BUSCH, Adolph. Die Organization und Buchführung des Eisengieserei und Maschinenbau-Betriebes. 8vo. 182 pp. Leipzig, 1863.
- BYRNE and Spon. A Dictionary of Engineering, Civil, Mechanical, Military and Naval; with Technical Terms in French, German, Italian and Spanish.
 Division I., A. to Bor. Division V., Fo. to Hyde.
 Division II., Bo. to Ba. Division VI., Hyd. to Lo.
 Division III., Br. to Da. Division VII., Lo. to Pump.
 Division IV., Da. to F. Division VIII., Pump. to Zinc.
 8 vols. 8vo. London, 1869–1874.
- CALLON, J. Cours professés à L'École des Mines de Paris. Première Partie. Cours de Machines. Tome I. Text and Atlas. 2 vols. Paris, 1873.
- COCKERILL, J. Portefeuille de, ou Descriptions des Machines construites dans les établissements de Seraing, depuis sa fondation jusqu'à ce jour. 2 vols. 4to. text; 2 vols. 2to. plates. Paris, 1859–1866.
- COULOMB, C. A. Théorie des Machines Simples. 4to. 368 pp., X. plates. Paris, 1821.

- DE LA GOUPILLIÈRE, J. N. H. *Traité de Mecanismes.*
8vo. 483 pp. Paris, 1864.
- DENAYROUZE, A. and L. *Des Aérophores et de leur application au travail dans les mines.* 8vo. 67 pp. Paris, 1872.
- DUBOIS and François. *Notice sur L'Installation des Appareils à Comprimer L'Air et de Perforation aux Charbonnages de la Société de Marihay.* 8vo. 16 pp. Liege, 1873.
- FORD, A. B. & Co. *The Machinist. An Index to Various Manufacturing Industries throughout the Country.*
4to. 135 pp. New-York, 1873.
- GAMOND, Thomé de, and Belly, Felix. *Carte d'Étude pour le Trac et le Profil du Canal de Niagara précédé de Documents publiés sur cette question.* 4to. 90 pp., with a map. Paris, 1852.
- GROSSMAN, M. *A Practical and Theoretical Treatise on the Detached Lever Escapement.*
8vo. 178 pp. text; Atlas, 4to. XX. plates. Leipsig, 1866.
- HAINDL, S. *Die Maschinenkunde und Maschinenzeichnung.*
2 vols. 4to. text and plates. Munich, 1843.
- HAUER, Julius Ritter von. *Die Hüttenwesens-maschinen.*
8vo. 286 pp., XXVIII. plates. Vienna, 1867.
- HERMANN, Frederick. *Katechismus der Uhrmacherkunst.*
12mo. 92 pp. Leipsig, 1863.
- HÖRMANN, A. *Die Neuen Wasserhaltungs-Maschinen auf den Dechenschächter bei Saarbrücken, der Tiefbau anlage zu Rüdersdorf und der Ferdinandsgrube bei Kattowitz.*
2 vols. 4to. text and plates. Berlin, 1874.
- JOHNSON, William. *The Practical Draughtsman's Book of Industrial Design and Machinist's and Engineer's Drawing Companion.* 4to. 200 pp., LV. plates. Philadelphia, 1871.
- KILBOURN, John. *A Compilation of Public Documents concerning the Ohio Canals, which are to connect Lake Erie with the Ohio River; comprising a complete Official History of these Great Works of Internal Improvement.*
8vo. 452 pp. Columbus, 1832.
- LENOIR. *Gas Engine.* 8vo. 19 pp. 1866.
- MARTENS, J. H. *Beschreibung der Hemmungen der höheren Uhrmacherkunst.*
2 vols. 8vo. text; Atlas, XXIV. plates. Leipsig, 1858.
- MIGOUT und Bergery. *Berechnung der gebräuchlichsten Maschinen.*
Deutsch herausgegeben von C. H. Schnufe und W. Kornhardt.
8vo. 434 pp. Brunswick, 1845.
- MOINET, M. L. *Nouveau Traité General Horlogerie.*
2 vols. 8vo. Paris.
- MORIN, Arthur. *Aide-Mémoire de Mécanique Pratique.* Sixth edition. 8vo. 702 pp. Paris, 1871.
- *Hilfsbuch für praktische Mechanik Übersetzt von Holtzmann.* 8vo. 233 pp. Karlsruhe, 1838.
- MOSELY, H. *Mechanical Principles of Engineering and Architecture, with additions by D. H. Mahan, LL. D.*
8vo. 699 pp. New-York, 1806.
- NAVIER, Louis. *Lehrbuch der höheren Mechanik.*
12mo. 459 pp. Hanover, 1858.

- NAVIER, Louis. *L'Application de la Mécanique à L'Établissement des Constructions et des Machines.* 8vo. 448 pp. Paris, 1833.
- PAGET, F. A. *Ueber eine internationale Assimilirung der Patent-gesetze.* 8vo. 33 pp. Berlin, 1873.
- PHILLIP. *Manuel Pratique pour L'Étude et la Calcul des Ressorts en Acier employés dans le Materiel des Chemins de Fer.* 68 pp., I. plate.
Calcul de la Resistance des Poutres Droites. 40 pp.
- PONCELET, J. V. *Cours de Mécanique Appliquée aux Machines.* 8vo. 520 pp., II. plates. Paris, 1874.
- REDTENBACHER, Jacob Ferdinand. *Principien der Mechanik und des Maschinen-baues.* 8vo. 317 pp. Mannheim, 1859.
- *Theorie und Bau der Turbinen.* 4to. 183 pp., XXI. plates. Mannheim, 1860.
- *Theorie und Bau der Wasser-Räder.* 4to. 264 pp. Mannheim, 1858.
- REPORT on Inter-Oceanic Canals and Rail-Roads between the Waters of the Atlantic and Pacific. 8vo. 28 pp. Washington, 1866.
- RITTER, August. *Lehrbuch der technischen Mechanik.* 8vo. 721 pp. Hanover, 1865.
- ROWLAND, Thomas F. *Improvement in Machinery for Elevating and Transporting Coal, Coke or other Material, and for the Charging and Discharging of Gas Retorts, as applied to the Manufacture of Illuminating Gas.* 4to. 7 pp., VIII. plates. Brooklyn, 1873.
- SCHOLL, E. F. *Führer des Machinisten.* 8vo. 656 pp. Brunswick, 1873.
- THURSTON, R. H. *On the Molecular Changes Produced in Iron by Variations of Temperature.* *Reprinted from the Iron Age.* 8vo. Philadelphia, 1873.
- VINTON, Francis L. *Lectures on Machines—Theory of Construction and Calculation of their Effect, delivered at the School of Mines.* Lithographed from notes taken by August Van Cleef. 4to. 94 pp. New-York, 1869.
- *Theory of the Strength of Materials, illustrated by Applications to Machines and Buildings.* 8vo. 182 pp. New-York, 1874.
- WEISBACH, Julius. *A Manual of the Mechanics of Engineering.* Translated from the Fourth German Edition by Eckley B. Coxe. Vol. I. *Theoretical Mechanics.* 8vo. 1112 pp. New-York, 1872.
- *Lehrbuch der Theoretisch Mechanik.* 3 vols. 8vo. Brunswick, 1855, 1863, 1865.
- *Appendix.* 8vo. 48 pp. Brunswick, 1860.
- *Principles of the Mechanics of Machinery and Engineering.* 2 vols. 8vo. London, 1847, 1848.
- ZEUNER, Gustav. *Die Schiebersteinerungen.* 8vo. 181 pp. Freiberg, 1858.

*See, also, International Exhibitions, p. 381.
 Periodical Publications, p. 351.*

THE STEAM ENGINE.

- BACON, F. W. A Treatise on the Richards' Steam Engine Indicator. 12mo. 155 pp. New-York, 1869.
- BOURNE, John. A Treatise on the Steam Engine. 4to. 248 pp., XXXIII. plates. London, 1853.
- BURGH, N. P. The Indicator Diagram Practically considered. 8vo. 199 pp. London, 1869.
- The Slide Valve Practically Considered. 8vo. 121 pp. London, 1868.
- CHANDLER, C. F. Report on Water for Locomotives and Boiler Incrustations. Vol. IV., Pamphlets. Octavo series. 8vo. 35 pp. New-York, 1865.
- CRESSON, J. C. American Anti-Incrustator. 8vo. 37 pp. Philadelphia, 1866.
- DU TEMPLE, L. Cours de Machines à Vapeur. 8vo. 607 pp. 4to. Atlas, XXVII. plates. Paris, 1865.
- FAREY, John. Treatise on the Steam Engine, historical, practical and descriptive. 4to. 728 pp., XXV. plates. London, 1827.
- GUINOTTE, Lucien. Étude Générale sur la Detente Variable et spécialement sur son application aux Machines à Vapeur. 8vo. 12 pp. Liege, 1872.
- JULLIEN, C. E. Traité theoretique et pratique de la Construction des Machines à Vapeur. 2 vols., text and plates. Paris, 1862.
- PERARD, L. Traité du Chauffage et de la Conduite des Machines à Vapeur, Fixé et Locomotives. 8vo. 230 pp. Paris, 1864.
- RENWICK, James. Treatise on the Steam Engine, with a New Theory of the Steam Engine by C. G. De Pambour. 8vo. 327 pp. New-York, 1848.
- STILLMAN, Paul. The Steam Engine Indicator and the Improved Manometer Steam and Vacuum Gauges. 8vo. 90 pp. New-York, 1864.
- STUART, Robert. A Descriptive History of the Steam Engine. 8vo. 228 pp. London, 1828.
- THURSTON, R. H. Experimental Steam Boiler Explosions. Vol. IV., Pamphlets. Octavo series. 8vo. 12 pp. Philadelphia, 1872.
- TREDGOLD, Thomas. The Steam Engine. 4to. 370 pp., XX. plates. London, 1827.
- WICKSTEED, Thomas. Explanation of the Plates of the Cornish, and Boulton and Watt Engines, erected at the London Water Works, Old Ford. 4to. 24 pp., VIII. plates. London, 1842.
- ZERNIKOW. Die Theorie der Dampfmaschinen. 8vo. 233 pp. Brunswick, 1859.
- ZEUNER, Gustav. A Treatise on Valve Gears, with Special Reference to the Link Motions of Locomotive Engines. Translated from the German by Moritz Muller. 8vo. 244 pp. London, 1869.
- See, also,* International Exhibitions, p. 381.
Periodical Publications, p. 351.

MILITARY ENGINEERING.

- BAILEY, J. W. Chemical Notes on Gunpowder and its Materials. Selected for the use of the U. S. Cadets. Vol. III., Pamphlets-Quarto series. 4to. 14 pp. 1838.
- BARNARD, J. G. Report on the Fabrication of Iron for Defensive Purposes. *Professional Papers of the Corps of Engineers of the United States Army.* No. 21. 4to. 230 pp. Washington, 1870.
- Supplement to above. 4to. 51 pp. Washington, 1872.
- BARTLET, W. H. C. On Rifled Guns. 4to. 31 pp.
- BEEKMAN, James W. Centenary Address, delivered before the Society of the New-York Hospital, Monday, July 24, 1871. Appendix—Containing some Short Hints on the Structure and Economy of Hospitals, particularly applied to Military Ones; with the General Means of Preserving Health in the Army. 8vo. 20 pp. New-York, 1871.
- BELIDOR, B. F. de. La Science des Ingenieurs dans la Conduite des Travaux de Fortification et d'Architecture Civile. 4to. 6 vols. bound in one. Paris, 1729.
- BRITISH Patent Office. Specifications of Patents relating to—
—— Revolving Fire Arms. W. W. Richards, Patentee. 4 pp., I. plate. 1855.
- CRAIG, H. K. Report of the Officers of the Ordnance Department on some experiments to determine the Strength and other properties of Metals for Cannon. 4to. 427 pp. Washington, 1856.
- CUTBUSH, James. A System of Pyrotechny, designed for Exhibition and for War. 8vo. 612 pp. Philadelphia, 1825.
- DELAFIELD, Major R. The Art of War in Europe in 1854, 1855, 1856. 4to. 287 pp., CLXXXVI. plates. Washington, 1860.
- DORR, Eben P. A Brief Sketch of the First Monitor and its Inventor. A Paper read before the Buffalo Historical Society, January 5, 1874. 8vo. Buffalo, 1874.
- HAUPT, Hermann. Military Bridges, with Suggestions of New Expedients and Constructions for Crossing Streams and Chasms. Including, also, Designs for Tressle and Truss Bridges for Military Rail-Roads. 8vo. 310 pp., LXIX. plates. New-York, 1864.
- MAHAN, D. H. Descriptive Geometry, as applied to the Drawing of Fortifications and Stereotomy. For the use of the Cadets of the U. S. Military Academy. 8vo. 60 pp., IX. plates. New-York, 1873.
- MORDECAI, A. Report of Experiments on Gunpowder. 8vo. 328 pp. Washington, 1845.

- MULLAN, John. Report on the Construction of a Military Road from Walla-Walla to Fort Benton.
8vo. 363 pp. Washington, 1863.
- REPORTS of the Military Commission to Europe in 1855 and 1856.
Mordecai, Major Alfred. General Report. 176 pp., XXI. plates.
- Schon, J. A Brief Description of the Modern System of Small Arms, as adopted in the various European Armies. Translated from the German by J. Gorgas. 56 pp., XIII. plates.
4to. Washington, 1861.
- REPORT of the Sanitary Commission dispatched to the Seat of War in the East in 1855, 1856. 8vo. 301 pp. London, 1857.
- RODMAN, T. J. Reports of Experiments on the Properties of Metals for Cannon, and the Qualities of Cannon Powder; with an Account of the Fabrication and Trial of a 15 inch Gun. 4to. 308 pp., XXI. plates. Boston, 1861.
- TREADWELL, Daniel. On the Construction of Hooped Cannon. Sequel to a Memoir "On the Practicability of Constructing Cannon of Great Calibre," &c. Vol. XX., Pamphlets. Octavo series.
8vo. 40 pp. Boston, 1864.

See, also, International Exhibitions, p. 381.
Periodical Publications, p. 351.

MINING ENGINEERING.

ADELBERG and Raymond. Report of an Examination of the Lands known as the Great Kanawha Property of West Virginia.

8vo. 16 pp. New-York, 1864.

AGRICOLÆ, Georgii. De ortu et causis subterraneorum; De natura eorum quæ effluunt ex terra; De natura fossilium; De ueteribus et novis metallis. Bermannus, sive De re metallica Dialogus. Interpretatio Germanica nova rei metallicæ, additio Indice foecundissimo.

4to. 827 pp., III. plates. Basileæ, 1546.

AMALIO Mining Company of Clear Creek County, Colorado. Prospectus, Act of Incorporation, &c. Vol. XXXII., Pamphlets. Octavo series.

8vo. 32 pp. New-York, 1866.

AMERICAN Bureau of Mines Publications. A Geological and Agricultural Survey of 100 miles West of Omaha. Vol. XV., Pamphlets. Octavo series.

8vo. 44 pp. New-York, 1866.

——— Statement of the objects of the American Bureau of Mines, with list of officers, &c.

8vo. 14 pp. New-York.

ANLEITUNG zur Anfertigung der Vermögens—und Ertrags—Berechnungen bei der Bergwerks—Hütten—und Salinen Verwaltung.

8vo. 56 pp. Berlin, 1866.

——— zur Ausstellung der Etats und Oekonomie pläne der Bergwerks—Huetten—und Salinen Verwaltung von 15 December, 1866.

8vo. 40 pp. Berlin, 1866.

A SERIES of Charts of the Freiburg Mining District, showing the location of Mines, the direction of Lodes, &c. 5 charts.

ASHLAND Copper Mining Company of Wisconsin. Act of Incorporation and Articles of Association.

8vo. 23 pp.

A SUMMARY of Statistics relating to Mining for 1867. (In Russian.)

8vo. 363 pp. St. Petersburg, 1867.

BARLET, C. H. Tenue des Lines appliquée à la compatabilité des Mines de Houille, des Hauts Fourneaux et des Usines à Fer.

8vo. 217 pp. Paris, 1861.

BAUERMAN, Henry. A Descriptive Catalogue of the Geological, Mining and Metallurgical Models in the Museum of Practical Geology.

12mo. 199 pp. London, 1865.

BEER, A. H. Erdbohrkunde. Ein Abschnitt aus dem Aufschluss und Ausrichtungs—Arbeiten der allgemeinen Bergbaukunde von August Heinrich Beer.

8vo. 399 pp. Prag, 1858.

——— Lehrbuch der Markscheide-Kunst, für Bergschulen und Selbstunterricht.

8vo. 335 pp. Prag, 1856.

BEHSE, W. H. Sammel—Mappe für Bau—Entwürfe. (*Imperfect.*)

Folio. 1866—1869.

- BEOBACHTUNGEN. Versuche und Einführungen den K. K. Kunst-Bau-Berg-und Hüttenwesens-Beamten im Gebiete des Berg und Huttenmännischen Maschinen und Bauwesens.
3 vols. text; 3 vols. plates. 1851-1853.
- BERGBAUKUNDE. 2 vols. 4to. Leipsig, 1789, 1790.
- BERICHTE über die Zweite Allgemeine Versammlung von Berg-und Huttenmännern zu Wien. (21 bis 28 September, 1861.)
8vo. 123 pp. Vienna, 1862.
- BIDRAG till Svriges Officiela Statistik. Bergshauteringen. Commerce Cellegii. Underdaniga Berattelse for ar 1873.
4to. 32 pp. Stockholm, 1874.
- BLACK HAWK Gold Mining Company. Prospectus, &c. Vol. XXXII., Pamphlets. Octavo series. 8vo. 15 pp., I. map. New-York.
- BORN, Jr., and Frebra, F. W. H. v. Bergbaukunde.
2 vols. 4to. Leipsig, 1789, 1790.
- BRAND, C. P. Éléments pratiques d'Exploitation.
8vo. 592 pp., XXXII. plates. Paris, 1829.
- BROOKS, H. S. A Report on the Property of the Triunfo Silver Mining and Commercial Co. of Lower California.
4to. 80 pp. Philadelphia, 1866.
- BURAT, Amédée. Geologie Appliquée Traité du Gisement et de l'Exploitation des Utiles Minéraux. Première Partie. Geologie Pratique. Deuxième Partie. Exploitation des Mines. Quatrième édition.
2 vols. 8vo. Paris, 1858, 1859.
- BURLEIGH Drill. Two Photographic Views of the. 4to.
- BURY, Aug. Traité de la Legislation des Mines, des Minères, des Usines et de Carrières en Belgique et en France ou Commentaire Theoretique et Pratique de la Loi de 21 Avril, 1810, et des Lois et Réglements qui s'y Rattachent.
2 vols. 8vo. Liege, 1859.
- CALLON, J. Cours professés a L'École des Mines de Paris. Première Partie. Cours de Machines. Tome I., Text and Atlas. Deuxième Partie. Cours D'Exploitation des Mines. Tomes I., II., Text and Atlas.
3 vols. 8vo. text; 3 vols. plates. Paris, 1873.
- CALVOR, Hemming. Historische Nachrichte von der Unter-und gesamten Ober-Harzischen Bergwerke.
4to. 254 pp. Brunswick, 1765.
- CARNALL, R. von. Bergmännisches Taschen-Buch für alle Freunde der Bergwerke-Industrie, im Besondern derjenigen Ober-schlesiens.
12mo. 257 pp. Breslau, 1844.
- COAL and Coal Pits of Great Britain.
12mo. 243 pp. London, 1855.
- Mines. Reports of Inspectors of.
2 vols. 2to. London, 1859.
- COMBES, Ch. Handbuch der Bergbaukunst bearbeitet von C. Hartmann. 2 vols. 4to. text and plates. Weimar, 1844.
- Traité de l'Exploitation des Mines.
3 vols. 8vo. text; 4to. plates. Liege, 1846.
- COTTA, Bernhard von. Erzlagerstätten im Banat und in Serbien.
8vo. 108 pp., I. chart. Vienna, 1864.

- CZERNY, A. *Die Bergbau Böhmens.* 8vo. 26 pp. Prag, 1868.
- DADOW, S. H., and Bannan, B. *Coal, Iron and Oil; or, the American Practical Miner.* 8vo. 786 pp. Pottsville, Pa., 1866.
- D'ALIGNY, H. F. O., U. S. Commissioner, Huet, A., Geyler, F., and Lepainteur, C. *Report on Mining and the Mechanical Preparation of Ores.* Paris Exposition, 1867.
8vo. 104 pp., III. plates. Washington, 1870.
- DAVY, Sir Humphrey. *On the Safety Lamp.*
8vo. 148 pp. London, 1818.
- *The Complete Works of, edited by his brother, John Davy.*
Vol. VI. *Researches on the Safety Lamp, &c.*
8vo. 264 pp. London.
- DAWSON, Wm. McD. *Memorandum in relation to the Gold Mines of the Chaudière in Lower Canada.* 8vo. 16 pp. 1865.
- DAXHELET, A. *Les Perforatrices à Air Comprimé Appliquées aux Travaux de Mines système de Dubois et Francois.*
8vo. Paris, 1873.
- DE-CUYPER, Ch. *Revue de L'Exposition de 1867. Mines, Metallurgie, Chimie, Mécanique, Navigation, Chemins de Fer, Constructions, Sciences et Arts Appliqués à L'Industrie.* Tomes I. to IV. Text and plates. 6 vols. 8vo.
- DEGOUSSÉE, J. *Guide du Sondeur ou Traité Theoretique et Pratique des Sondages.*
2 vols. 8vo. text and plates. Paris, 1847.
- and Laurent. *Guide du Sondeur.*
2 vols. 8vo. text and plates. Paris, 1861.
- DELESSE, A. *Procédé Mecanique pour Determiner la Composition des Roches, et Études sur les Metamorphisms des Roches.*
8vo. 72, 95 pp. Paris, 1866, 1869.
- DENAYROUZE, A. and L. *Des Aérophores et de leur application au travail dans les mines.* 8vo. 67 pp. Paris, 1872.
- DENKSCHRIFT zur Erinnerung an die Verdienste des in Dresden am 30 Juni, 1817, verstorbenen K. S. Bergraths Werner und an die Fortschritte bei der Bergakademie zu Freiberg.
4to. 174 pp. Freiberg, 1848.
- DER GRUBENBRAND und die bösen Wetter.
12mo. 24 pp. Clausthal, 1849.
- DIE Chursächsische Bergwerksverfassung.
8vo. 146 pp. Leipsig, 1787.
- DIE Fortschritte der berg-und hüttenmännischen Wissenschaften in den letzten hundert Jahren. Als zweiter Theil der Festchrift zum hunderjährigen Jabiläum der Königl. Sachs. Bergakademie zu Freiberg. 8vo. 146 pp. Freiberg, 1867.
- DIE Gruben und Anlagen der Vereinigungs—Gesellschaft für Steinkohlenbau in Wurm—Revier zu Kohlschied bei Aachen.
12mo. 8 pp.
- E Lage der Bergbau-und Hütten—Industrie in Ober Schlesien.
8vo. 92 pp. Berlin, 1861.

- DUBOIS and François. Notice sur L'Installation des Appareils à Comprimer L'Air et de Perforation aux Charbonnages de la Société de Marihaye. 8v. 16 pp. Liege, 1873.
- ÉCOLES des Arts et Manufactures et des Mines annexée à l'Université de Liège. Programmes généraux et programmes détaillés, &c. 8vo. Brussels, 1864.
- ERKLARENDES Wörterbuch der im Bergbau, in der Hüttenkunde und in Salinwerken vorkommenden-technischen Kunstaussdrücke und Fremdwörter. 8vo. 176 pp. Burgsteinfurt, 1869.
- FALLER, Gustav. Die Schemnitzer Metall-Bergbau in seinem jetzigen Zustande. 8vo. 89 pp. Schemnitz, 1865.
- FERBER, J. J. Nachricht von dem Anquellen der gold und silberhaltigen Erze, Kupfersteine und Speisen in Ungarn und Böhmen. 24mo. 200 pp. Berlin, 1787.
- FESTSCHRIFT zum hundertjährigen Jubiläum der Königlichen Sächsischen Bergakademie zu Freiberg am 30 Juli, 1866. 8vo. 336 pp. Dresden, 1866.
- GAETSCHMAN, Moritz F. Anleitung zur Grubenmauerung. 4to. 188 pp., XXXV. plates. Schemnitz, 1831.
- Die Aufbereitung. 2 vols., text and plates. Leipsig, 1872.
- Die Auf und Untersuchung von Lagerstätten Nutzbarer Mineralien. 8vo. 480 pp. Freiberg, 1856.
- Die Grubenzimmerung. Erste Abtheilung, 8vo. 125 pp., VI. plates. Freiberg, 1872. Zweite Abtheilung, 8vo. 134 pp., XV. plates. Freiberg, 1873.
- Die Lehre von den bergmännischen Gewinnungsarbeiten. 8vo. 788 pp. Freiberg, 1846.
- Sammlung Bergmännischer Ausdrucker. 12mo. 90 pp. Freiberg, 1859.
- GAMBRESY, A. Dictionnaire Minier et Metallurgique. 12mo. 203 pp. Paris, 1868.
- GEDENKBUCH zur Hundertjährigen Gründung der K. ung. Berg- u. Forstakademie in Schemnitz, 1770–1870. 8vo. 389 pp. Schemnitz, 1871.
- GLEPIN, G. De L'Etablissement des Puits des Mines. 3 vols. 8vo. Liege, 1846.
- GOULD and Curry Silver Mining Company vs. North Potosi Gold and Silver Mining Company. Opinion of Referee. 8vo. 12 pp. Virginia, N. T., 1864.
- GREENWELL, G. C. A Practical Treatise on Mining Engineering. Second edition. 2 vols. 4to. text; Atlas, plates. London, 1870.
- GRIMM, Johann. Grundzüge der Geognosie für Bergmänner. 8vo. 360 pp. Prag, 1856.
- GRUNER, L. Étude des Bassins Houilliers de la Creuse. 4to. 204 pp. Paris, 1868.
- GUNTHER, J. R. Theorie neuer Erz-Separations-Methoden. 8vo. 61 pp. Prag, 1841.
- HARTMANN, Carl. Berg-und Huttenmännischer Atlas. 4to. text; Atlas, XLII. plates. Weimar, 1860.

- HARTMANN, Carl. Der innern Gebirgswelt.
8vo. 312 pp. Stuttgart, 1838.
- Der treue Führer beim Schürfen und bei Bohrarbeit.
12mo. 232 pp. Weimar, 1856.
- Die Mineralischen Brennstoffe, Steinkohlen, Braunkohlen und Torf.
8vo. 122 pp. Halle, 1856.
- Handbuch der Bergbau-und Hüttenkunde.
4to. 1313 pp. text; Atlas, XLV. plates. Weimar, 1858.
- Handbuch des Steinkohlen-Bergbaues. *Incomplete*.
4to. 120 pp. text; Atlas, X. plates. Weimar, 1855.
- Ueber die mechanische Aufbereitung der silberhältigen Bleierze.
8vo. 335 pp. Weimar, 1858.
- HASKOLL, W. D. The Engineers', Mining Surveyors' and Contractors' Field-Book.
8vo. 189 pp. London, 1866.
- HAUER, Julius Ritter von. Die Fördermaschinen der Bergwerke.
8vo. text, 438 pp.; Atlas, XXX. plates. Leipzig, 1871.
- HAUPT, Theodor. Bausteine zur Philosophie der geschichte der Bergbaues.
8vo. 101 pp. Leipzig, 1865.
- HAUSMANN, J. F. L. Norddeutsche Beiträge zur Berg-und Hüttenkunde.
8vo. 121 pp. Brunswick, 1806.
- Über den Gegenwärtigen Zustand und die Wichtigkeit des Hannoverschen Harzes.
8vo. 411 pp. Göttingen, 1832.
- HEDLEY, J. The Working and Ventilation of Coal Mines.
8vo. 128 pp. London, 1851.
- Traité pratique de l'Exploitation des Mines de Houille. Traduit par Lambert et Modesse.
8vo. 100 pp. Liege, 1853.
- HENCHLER, E. Die Berg Knappen.
Folio. 12 pp., LXXIV. plates. Dresden, 1857.
- HENKELS, J. F. Pyritologia oder Kieselhistorie als des vornehmsten Minerals. Mit einen vorrede von Nutzen des Bergwerks.
8vo. 904 pp. Leipzig, 1754.
- HENVAUX, D. Construction der Walzwerke. Bearbeitet von Dr. Carl Hartmann.
8vo. 73 pp. Leipzig, 1859.
- HITINGER, Peter. Das Quecksilber-Bergwerk Industrie, von seinem Beginne bis zur Gegenwart.
12mo. 86 pp. Larbach, 1860.
- HOSKOLD, H. D. A Practical Treatise on Mining, Land and Railway Surveying, Engineering, &c.
8vo. 249 pp. London, 1863.
- ITZENPLITZ, *Grafen von*. Katalog für die Sammlung der Bergwerks-und Steinbruchs-Produkte Preussens auf der Industrie und Kunstausstellung zu Paris im Jahre, 1867.
- JAVAL et Garnier. Machines à Percer les Roches.
2 vols. 8vo.
- Machines à Percer, Couper, et Abattre les Roches.
8vo. 91 pp.
- JOCHAMS. Notice sur l'Incendie d'une Couche de Houille.
Vol. III., Pamphlets. Octavo series. 8vo. 42 pp., II. plates. 1852.
- KARSTEN, E. J. B. Lehrbuch der Salinkunde.
2 vols. 8vo. Berlin, 1846.
- KEATING, W. H. The Art of Mining.
8vo. 87 pp. Philadelphia, 1821.
- KERL, Bruno. Grundriss der Salinkunde.
8vo. 232 pp. Brunswick, 1868.

- KIMBALL, J. P. Notes on the Iron Ores of Marquette, Michigan.
Vol. XXV., Pamphlets. Octavo series. 8vo. 15 pp. 1864.
- On the Silver Mines of Santa Eulalia, State of Chihuahua,
Mexico. Vol. XIV., Pamphlets. Octavo series. 8vo. 15 pp. 1870.
- Our Mineral Interest. 8vo. 42 pp.
- Report on the Coal of the Broad Top Steam Coal Company
of Pennsylvania. 8vo. 8 pp. New-York, 1867.
- Report on the Extension of the Vermont Copper Company's
Copper Ore, (Gifford Tract,) Vershire, Orange Co., Vermont.
8vo. 7 pp., I. map. New-York, 1869.
- Report upon the Estate of the New-Jersey Coal Company
of Wilkesbarre, Pa. 8vo. 15 pp. New-York, 1865.
- KIND, E. G. Anleitung zum Abteufen der Bohrlöcher.
8vo. 188 pp. Luxemburg, 1842.
- KINGAND, Hague. Report on Mining Industrie.
4to. 647 pp., text; Atlas, XIV. plates.
- KLIPSTEIN, Auguste von. Gemeinützige Blätter zur Beförderung
des Bergbaues und Hüttenbetriebes.
Heft I. 110 pp. 4to. Frankfort, 1849.
Heft II. 124 pp., I. plate. 4to. Giessen, 1859.
- KROM, S. R. Description of Krom's System and Machinery for
Crushing Ores. 8vo. 75 pp. New-York, 1872.
- KUPELWEISER, F. Officieller Ausstellungs Bericht der Wiener
Weltausstellung, 1873.
Heft I. Bergbau und Hüttenwesen. 8vo. 19 pp. 1873.
- KURZER Abriss der Geographischen, Geognostischen und Bergbau-
betriebes der Siebenbürgischen Salinen.
16mo. 18 pp. Klausenberg, 1873.
- LAW Relating to the Regulation of Mines in Nova Scotia. Vol. III.,
Pamphlets. Octavo series. 8vo. 27 pp. Halifax, 1873.
- LEO, E. I. Die Aussuchung, Gewinnung und Förderung der
Braunkohlen. 8vo. 176 pp., XII. plates. Quedlinburg, 1854.
- Theoretische-practische Anleitung zum Tunnelbau.
8vo. 113 pp. Leipzig, 1853.
- W. Der Grubenhaushalt. 8vo. 220 pp. Quedlinburg, 1859.
- Lehrbuch der Bergbaukunde.
8vo. 525 pp. Quedlinburg, 1861.
- LES MINES D'Or de la Nouvelle Ecosse, 1862-1866.
8vo. 8 pp. Halifax, 1867.
- LESOINNE, A. Vorträge über allgemeine Hüttenkunde. Vol. I.
Part 1. Die Mechanische aufbereitung der Erze, &c.
8vo. 185 pp. Leipzig, 1860.
- LOTTNER, F. H. Leitfaden zur Bergbaukunde. Edited by A. Serlo.
2 vols. 8vo. Berlin, 1869.
- Ergänzensband zum Leitfaden der Bergbaukunde.
8vo. Berlin, 1872.
- H. Leitfaden zur Bergbaukunde. Edited by Dr. A. Serlo.
8vo. 444 pp. Berlin, 1873.
- LYMAN, B. S. A Report on the Bourinot Coal Claims and Land,
Cape Breton. 8vo. 17 pp. New-York, 1865.

- MAHLER, Julius. Die moderne Sprengtechnik dargestellt durch Bohrmaschinen, Luftkompressoren, Dynamit und verschiedenen Zündungen für die Gesteingewinnung im Steinbruche, dem Berg- und Eisenbahnbane, &c. 8vo. Vienna, 1873.
- MAYER, J. B. Anleitung zur Grubenzimmerung. 8vo. 126 pp. Mainz, 1843.
- MCCULLOCH, H. Letters of the Secretary of the Treasury, enclosing Report of James W. Taylor, Special Commissioner for the Collection of Statistics upon Gold and Silver Mining east of the Rocky Mountains. 8vo. 28 pp. Washington, 1867.
- MINING, Law (The) of the Territory of Arizona. 8vo. 12 pp. Prescott, 1864.
- MOWBRAV, George M. Tri-Nitro-Glycerine as applied in the Hoosic Tunnel, Submarine Blasting, &c. 8vo. 100 pp. North Adams, Mass., 1872.
- NEUBERT, E. W. Stammbaum über die Aufbereitung der Erzmassen von den Gängen der Kiesigen Bleiformation. 1 sheet, folio. Freiberg.
- NEW-YORK and Eldorado Gold Mining Company. *Report of the American Bureau of Mines.* 4to. 15 pp. New-York, 1867.
- NIEDERIST, J. Grundzüge der Bergbaukunde. 8vo. 284 pp. Prag, 1863.
- NOTICES sur les Collections, Cartes et Dessins. Relatifs au Service du Corps Imperial des Mines, à l'Exposition Universelle de Paris, 1867. 8vo. 315 pp. Paris, 1867.
- ODERHEIMER, F. Das Berg- und Hüttenwesen im Herzogthum Nassau. 8vo. Weisbaden, 1865.
- ONONDAGA Salt Company of Syracuse, New-York. Prospectus of the. 8vo. 50 pp. Syracuse, 1867.
- OVERMAN, Frederick. Practical Mineralogy, Assaying and Mining. 8vo. 230 pp. Philadelphia, 1863.
- PHILLIPS, J. Arthur. The Mining and Metallurgy of Gold and Silver. 8vo. 532 pp. London, 1867.
- and Darlington. Records of Mining and Metallurgy. 8vo. 304 pp. London, 1857.
- PHOTOGRAPHS of the Burleigh Drill, made by the Putnam Machine Co., Fitchburg, Mass. 2 views.
- PIKE, John Robert. Britain's Metal Mines. A Complete Guide to their Laws, Usages, Localities and Statistics. Vol. II., Pamphlets. Octavo series. 8vo. 66 pp. London, 1871.
- POLE, W. A Treatise on the Cornish Pumping Engine. 4to. 236 pp. London, 1844.
- PONSON, A. T. Handbuch des Steinkohlen-Bergbaues. 2 vols. 4to. Weimar, 1855.
- Traité de l'Exploitation des Mines de Houille. 2 vols. 8vo. text; 2 vols. 4to. plates.
- Supplement to above. 2 vols. 8vo. text; 2 vols. 4to. plates. Paris, 1867, 1868.
- QUICKSILVER Mining Company. Annual Report of the President. Vol. XXXII., Pamphlets. Octavo series. 8vo. 54 pp. 1867.

- REICHENECKER, Albert. Aufbereitung der geschwefelten Golderze in den Rocky-Mountains im Colorado Territorium der Vereinigten Staaten. 12mo. 80 pp., II. plates. Prag, 1871.
- REINWALD, Ch. Ueber die Steinsalzablagerung bei Stassfurt und die dortige Kali-Industrie. Vol. XXIV., Pamphlets. Octavo series. 8vo. 43 pp. Dresden, 1871.
- REPORTS of the Inspectors of Coal Mines to Her Majesty's Secretary of State; 1856, 1858. 2 vols. 4to. London.
- of the Special Commissioners on the Mineral Resources of the United States West of the Rocky Mountains.
- Browne, J. Ross. Special Commissioner, 1867, 1868. Introductory and Preliminary Reports.
- Appendix to above. Taylor, James W. Report on the Gold Mines of the United States East of the Rocky Mountains. 8vo. 360 pp. Washington, 1867.
- On California, Utah, Montana, Idaho, Washington Territory, Oregon and Alaska. 8vo. 674 pp. Washington, 1869.
- Appendix to above. Report on the States and Territories East of the Rocky Mountains. 71 pp.
- Raymond, Rossiter W. Special Commissioner, 1869—. Notes on California, Nevada, Montana, Idaho, &c. 8vo. 256 pp. Washington, 1869.
- for 1870. Statistics of Mines and Mining in the States and Territories West of the Rocky Mountains. 8vo. 805 pp. Washington, 1870.
- RITTENGER, G. von. Kurze Mittheilungen über Berg-und-Hüttenwesens-Maschinen und Baugesenstände auf der Allgemeinen Industrie Ausstellung zu Paris, 1867.
- P. Ritter von. Erfahrungen im berg-und hüttenmannischen maschinen,—bau-und aufbereitungswesen. Gratisbeilage Zum Oesterreichische Zeitschrift für Berg und Hüttenwesen auf 1872. 4to. 31 pp., XVI. plates. Vienna, 1872.
- Taschenbuch der Aufbereitungskunde. 12mo. 95 pp. Berlin, 1867.
- ROST, G. H. A. Bohrhäuser der Saline Circhocinek in Polen. 8vo. 192 pp., VIII. plates. Thorn, 1843.
- ROWLAND, Thomas F. Improvement in Machinery for Elevating and Transporting Coal, Coke or other Material, and for the Charging and Discharging of Gas Retorts, as applied to the Manufacture of Illuminating Gas. 4to. 7 pp., VIII. plates. Brooklyn, 1873.
- RZHIA, Franz. Lehrbuch der Gesammten Tunnelbunkunst. Vol. I. 723 pp. 1867. Vol. II. Parts 1, 2, 4. 4to. Berlin, 1872.
- SACHS, C. Ueber Gesteinbohrmaschinen. 8vo. 40 pp. Aix la Chapelle, 1865.
- SALT Company of Onondaga. Prospectus. 8vo. 50 pp. Syracuse, N. Y.
- SAN Buenaventura Pacific Petroleum Co. of New-York. A Brief Account of One Hundred Thousand Acres of Oil Lands in California. 8vo. 24 pp. New-York, 1865.

- SCHNEIDER, W. Taschenbuch, für practische Bergwerke und Bergwerks unternehmer. 12mo. 206 pp. Neuweid, 1857.
- SCHOEN, J. G. Der Tunnel-Bau. 4to. 48 pp., XIV. plates. Vienna, 1866.
- SCHOOLCRAFT, H. R. The Lead Mines of Missouri, including Observations on the Geology, &c., of Missouri and Arkansas. 8vo. 299 pp. New-York, 1819.
- SECKENDORFF, W. Ueber die beim Gebirgsbohren angewendets Meissel. 8vo. 46 pp. Berlin, 1862.
- SERLO, A., and Stolz, C. Bergbau und Hüttenwesen. 8vo. 104 pp. Brunswick, 1874.
- SILLIMAN, Benjamin, Jr. Report upon the Oil Property of the Philadelphia and California Petroleum Company, situated in Santa Barbara and Los Angeles Counties, California. vol. XXXII., Pamphlets. Octavo series. 8vo. 36 pp. Philadelphia, 1865.
- Report upon the Oil Property of the Pacific Coast Petroleum Company. 8vo. 24 pp. New-York, 1865.
- SILVER Mines (The) of Nevada. Vol. II., Pamphlets. Octavo series. 8vo. 76 pp., I. map. New-York, 1864.
- SILVERSMITH, J. A Practical Hand-Book for Miners, Metallurgists and Assayers. 8vo. 271 pp. New-York, 1866.
- SKALKOOSKY, C. Tableaux Statistiques de l'Industrie des Mines en Russie en 1871. 8vo. St. Petersburg, 1873.
- SMITH, J. Lawrence. On the Minerals of the Wheatly Mine, in Pennsylvania. Vol. XII., Pamphlets. Octavo series. 8vo. 14 pp. New-Haven, 1855.
- Re-examination of American Minerals. Part 4. Vol. XII., Pamphlets. Octavo series. 8vo. 11 pp. 1854.
- SMYTH, W. W. On the Mines of Wicklow and Wexford. 8vo. 64 pp., II. maps. London, 1853.
- SONORA, and the Value of its Mines. Report of the Sonora Exploring and Mining Company. 8vo. 42 pp. Cincinnati, 1856.
- SPARGO, Thomas. The Mines of Cornwall and Devon. Statistics and Observations. 8vo. 188 pp. London, 1865.
- STAPFF, F. M. Ueber Gesteinbohr Maschinen. 4to. 260 pp. text; Atlas, 2to. plates. Stockholm, 1869.
- STEGMAYER, Carl. Handbuch der Bergbaukunst für Jedermann. 8vo. 325 pp. Prag, 1862.
- STEWART, William M. Speech on the Bill to Establish a National School of Mines; delivered in the Senate of the United States, January 16, 1868. 8vo. 16 pp. Washington, 1868.
- STIEFF, C. E. Versuch einer Anleitung zu der Aufbereitung der Erze. 8vo. 231 pp. Cassell, 1818.
- STOUT, Peter F. Report upon the Lands of the St. Domingo Mining and Commercial Co. 8vo. 23 pp. Philadelphia, 1866.
- SUMMARY of Statistics relating to Mining for 1857. (In Russian.) Published by the Scientific Committee of the Corps of Mining Engineers. 8vo. 363 pp. St. Petersburg, 1867.
- TASHE, Hans. Kurser Ueberblick über das Berg-Hütten-und Salinen-Wesen im Grossherzogthum Hessen. 8vo. 92 pp. Darmstadt, 1858.

- TURNER, P. A. Russlands Montan-Industrie.
8vo. 206 pp., V. plates. Leipsig, 1871.
- ÜBER die Chursächsische Bergwerksverfassung. Ein Beytrag zur Statistik von Sachsen. 8vo. 146 pp. Leipsig, 1787.
- ÜBERSICHT über die Production der Bergwerke, Salinen und Hütten in dem Preussischen Staate im Jahre, 1871.
4to. Berlin, 1872.
- URE, Andrew. Dictionary of Arts, Manufactures and Mines.
2 vols. 8vo. New-York, 1863.
——— Supplement. 8vo. New-York, 1864.
- VERZEICHNISS sämmtlicher von der Kais. Akademie der Wissenschaften seit ihrer gründung bis letzten October, 1868. Veröffentlichten Druckschriften.
12mo. 300 pp. Vienna, 1869.
- VILLEFOSSE, Héron de. La Richesse Minerale.
3 vols. text; 1 vol. plates. Paris, 1869.
——— Mineral Reichthum. Edited by Carl Hartmann.
5 vols. text; Atlas of plates. Sondershaussen, 1872.
- VIOLETTE, H. Guide Pratique de la Fabrication des Mines.
12mo. 407 pp. Paris.
- VIVENOT, Franz v. Bergbau und Hüttenwesen. (Gruppe I. Section I.) Montanproducte mit Ausnahme der Fossilen Brennstoffe. *Officieller Berichte, Wiener Weltausstellung.* Vol. XXI, Pamphlets. Octavo series. 8vo. 9 pp. Vienna, 1873.
- WHELPLEY and Storer. Description of their New Method of Separating Metals from Sulphurets and other Ores. Vol. II., Pamphlets. Duodecimo series.
12mo. 12 pp., III. plates. Boston, 1866.
- ZERRENNER, C. Anleitung zum Gold-Platin-und Diamanten Waschen.
4to. 141 pp. Leipsig, 1851.
- See, also, International Exhibitions, p. 381.
Periodical Publications, p. 351.*

RAIL-ROAD ENGINEERING.

- BALDWIN Locomotive Works. Illustrated Catalogue of.
4vo. 134 pp. Philadelphia, 1872.
- BESCHREIBUNG der industriellen Unternehmungen der K. K. priv.
oesterr. Staats-Eisenbahn Gesellschaft. Wiener Weltaus-
stellung, 1873. 4to. 112 pp. Vienna, 1873.
- COUCHE, Ch. Voie, Materiel Roulant et Exploitation Technique
des Chemins de Fer. Tome I. Voie. Vol. II. Materiel
de Transport et Traction.
2 vols. 8vo. text; 2 atlases. Paris, 1867-1873.
- DEMPSEY, G. D. A Rudimentary Treatise on the Locomotive
Engine, in all its phases. Second edition.
2 vols., text and plates. London, 1867.
- EXPLORATIONS and Surveys for a Rail-Road Route from the Missis-
sippi River to the Pacific Ocean, made under the direction
of the Secretary of War, during the years 1853 to 1855.
Vols. I. to XI.; Vol. XII., parts 1, 2.
13 vols. 4to. Washington, 1855-1860.
- GALTON, *Capt.* D. Report relating to Railways for the year 1858.
2to. 150 pp. London, 1859.
- HOSKOLD, H. D. A Practical Treatise on Mining, Land and Rail-
way Surveying, Engineering, &c.
8vo. 249 pp. London, 1863.
- KNIGHT, J., and Latrobe, B. H. Report upon the Locomotive
Engines, and the Police and Management of several of the
Principal Rail-Roads in the Northern and Middle States.
8vo. 24 pp. Baltimore, 1836.
- LIEBENOW, W. Eisenbahnkarte von Deutschland, Nordliche
Hälfte und Südliche Hälfte. 2 large Charts. Berlin.
- MÉMOIRE sur les ressorts en acier employés dans le matériel des
Chemins du fer. 2 vols. in one. 8vo. 142, 64 pp. Paris.
- PHILLIP. Memoire sur les Ressorts en Acier employés dans le Ma-
teriel des Chemins de Fer. 142 pp., 1. plate.
Theorie de la Coulisser servant à produire la Detente Variable
dans les Machines à Vapeur et particulièrement dans les
Machines Locomotives. 64 pp., 1. plate.
8vo. Paris, 1852, 1853.
- REPORT on Inter-Oceanic Canals and Rail-Roads between the
Waters of the Atlantic and Pacific.
8vo. 28 pp. Washington, 1866.
- ROCKWELL, J. A. Report on Rail-Road and Canal Routes.
8vo. 678 pp. Washington, 1850.
- SELLERS, George Escol. Improvement in Locomotive Engines and
Rail-Roads. 4to. Cincinnati, 1849.

- STEVENS, John. Documents tending to prove the Superior Advantages of Rail-Ways and Steam Carriages over Canal Navigation; with Preface by Dr. Chas. King. Vol. IV., Pamphlets. Octavo series. 8vo. 46 pp. New-York, 1812. (Rep. 1852.)
- TROY and Greenfield Rail-Road and Hoosac Tunnel. Vol. XVIII., Pamphlets. Octavo series. 3 Pamphlets. 38, 54, 56 pp. Boston, 1865, 1866.
- TURNBULL, Wm. Reports on the Construction of the Piers of the Aqueduct of the Alexandria Canal. 4to. 49 pp. Washington, 1873.
- WIENER Weltausstellung. K. K. priv. österr. Staats-Eisenbahn Gesellschaft. Maschinen fabrik in Wien. Typen-Skizzen und Dimensionen der bei der Wiener Weltausstellung im Jahre, 1873, exponirten 5 Lokomotiven. V. plates. Small folio.
- WILLIAMS, J. J. The Isthmus of Tehuantepec: being the Results of a Survey for a Rail-Road to Connect the Atlantic and Pacific Oceans, made by the Scientific Commission under the Direction of Major J. G. Barnard. 8vo. 295 pp. New-York, 1852.
- WINDOM, Hon. Wm. The Northern Pacific Railway; its Effect upon the Public Credit, the Public Revenues and the Public Debt. A Speech delivered in the House of Representatives, January 5th, 1869. Vol. XIX., Pamphlets. Octavo series. 8vo. 60 pp. Washington, 1869.
- ZEUNER, Gustav. A Treatise on Valve Gears, with Special Reference to the Link Motions of Locomotive Engines. Translated from the German by Moritz Muller. 8vo. 244 pp. London, 1869.
- See, also, International Exhibitions, p. 381.
Periodical Publications, p. 351.*

INDUSTRIAL ARTS.

- AMATEUR Mechanic's Workshop, (The.)
8vo. 148 pp. London, 1870.
- AMERICAN Association of Wool Manufacturers: Objects and Plan
of the; its Organization and Articles of Association and By-
Laws. 8vo. 20 pp. Boston, 1866.
- ANTISELL, T. Hand-Book of the Useful Arts.
12mo. 692 pp. New-York, 1852.
- BANKS, N. P. A Speech upon the Representation of the United
States at the Exhibition of the World's Industry, Paris, 1867.
Delivered in the House of Representatives, March 14, 1866.
8vo. 24 pp. Washington, 1866.
- BARNARD, F. A. P. Modern Industrial Progress, and the Influ-
ences Accelerating its March. An Address delivered before
the Am. Inst. of N. Y., at its forty-first annual exhibition.
Vol. XVIII., Pamphlets. Octavo series.
8vo. 40 pp. New-York, 1872.
- Report on Machinery and Processes of the Industrial Arts
and Apparatus of the Exact Sciences. Paris Universal Ex-
position, 1867.
8vo. 669 pp., VII. plates. New-York, 1869.
- BERICHTE über die Welt-Ausstellung zu Paris, im Jahre, 1867.
Band I. Einleitung—1. Die Kunstwerke und die Histoire der
Travail. 2. Instrument für Kunst und Wissenschaft.
Band II. Text and plates. 1. Werkzeuge und Maschinen.
2. Verkehrsmittel.
Band IV. 1. Garne, Gewebe, Bekleidungs-Gegenstände
und Papier. 2. Kunst Gewebe, Möbel, und Einricht-
ungsstücke.
Band VI. Social-Oekonomische Abtheilung.
6 vols., text; 1 vol. plates. 8vo. Vienna, 1869.
- BIGELOW, Erastus B. An Address upon the Wool Industry of the
United States, delivered at the Exhibition of the American
Institute in the City of New-York, October 5, 1869.
8vo. 22 pp. New-York, 1869.
- BISHOP, J. L. A History of American Manufactures from 1608 to
1860. 3 vols. 8vo. Philadelphia, 1866.
- BRITISH Patent Office. Abridgments of Specifications of Patents
relating to—
——— Paper, Paste-Board and Papier Maché. 1665–1867.
Parts I. and II. 184, 166 pp. 1858.
- BRITISH Patent Office. Specifications of Patents relating to—
——— Machinery for the Manufacture of Sheet Tin. J. H. John-
son, Patentee. 4 pp., I. plate. 1859.

- CATALOGUE des Produits Industriels et des Œuvres d'Art de Belgique exposés à L'Exposition Universelle de Paris, 1867.
12mo. 365 pp. Brussels, 1867.
- COLWELL Lead Co. Tin-Lined Lead Pipe. Descriptive Pamphlet.
12mo. New-York, 1873.
- DE CUYPER, Ch. Revue de L'Exposition de 1867. Mines, Metallurgie, Chimie, Mécanique, Navigation, Chemins de Fer, Constructions, Sciences et Arts Appliqués à L'Industrie. Tomes I. to IV. Text and plates. 6 vols. 8vo.
- ÉCOLES des Arts et Manufactures et des Mines annexée à l'université de Liège. Programmes généraux et programmes détaillés, &c. 8vo. Brussels, 1864.
- GROTHE, Hermann. Katechismus der Bleicherei, Färberei und des Zeugdruckes. 12mo. 234 pp. Leipsig, 1862.
- Katechismus der Spinnerei, Weberei und Appretur. 24mo. 144 pp. Leipsig, 1861.
- HANDBOOK (The) of Turning. 12mo. 144 pp. London, 1859.
- HAYES, John L. Statement of Facts relative to Canada Wools, and the Manufactures of Worsted. 8vo. 21 pp. Boston, 1866.
- The Angora Goat: its Origin, Culture and Products. 8vo. 38 pp. Boston, 1868.
- The Fleece and the Loom. An Address before the National Association of Wool Manufacturers, at the First Annual Meeting in Philadelphia, Sept. 6, 1865. 8vo. 80 pp. Boston, 1866.
- The Solidarity of the Industries, as illustrated by the Relations of the Woolen Manufacture. An Address delivered before the Fair of the American Institute, New-York City, October 13, 1870. 8vo. 28 pp. Cambridge, 1870.
- The Wools of the United States. 8vo. 47 pp. Boston, 1872.
- HEUZE, Eleonore. Katechismus der Kochkunst. 8vo. 135 pp. Leipsig, 1853.
- HORSFORD, E. N. Report on an Investigation of the Sources of the Offensive Odors which are ascribed, in a petition by John M. Tayler and others, before the State Board of Health, to the Hog-Slaughtering Establishment of John P. Squire & Co., of East Cambridge. 8vo. 40 pp. Cambridge, Mass., 1873.
- JOHNSON, *Pres't.*, Andrew. A Message to the House of Representatives, transmitting the report of Elliot C. Cowdin, Esq., Commissioner to the Paris Exposition of 1867, on Silk and Silk Manufactures. Vol. XVIII., Pamphlets. Octavo series. 8vo. 38 pp. Washington, 1868.
- LACROIX, Eugène. Études sur L'Exposition de 1867, ou Les Archives de L'Industrie aux XIX. Siècle. Description Générale, Encyclopédique, Méthodique et Raisonnée de L'État Actuel des Arts, des Sciences, de L'Industrie et de L'Agriculture, chez tous les Nations. 10 vols. 8vo., text and plates. Paris, 1867-1869.

- LE BLANC. Nouveau Système complet de Filature de Coton usité en Angleterre. 4to. 156 pp. Paris, 1828.
- LEHRFELDT, L. Bijouterie fabrikant und Goldarbeiter. 8vo. 56 pp. Pforzheim, 1862.
- LE ROUX, Jules. L'Industrie Moderne au Champ de Mars. Coup D'Œil sur L'Exposition de 1867. 8vo. 210 pp. Paris.
- LYMAN, B. S. Scientific Education in its Relations to Industry. An Address delivered at the Sheffield Scientific School of Yale College. Vol. XIX., Pamphlets. Octavo series. 8vo. 30 pp. New-Haven, 1867.
- MILLING and Manufacturing Co., of Boston. Report of the Consulting Engineer. 8vo. 15 pp. Boston, 1866.
- MORFIT, Campbell, and Morfit, Clarence. The Arts of Tanning, Currying and Leather Dressing. 8vo. 537 pp. Philadelphia, 1852.
- MUDGE, E. R., *United States Commissioner*. Assisted by John L. Hayes. Report upon Wool and Manufactures of Wool. 8vo. 143 pp. Washington, 1868.
- PERRAULT, J. Revue Agricole, Manufacture, Commerciale et de Colonisation, 8vo. 384 pp. Montreal, 1863, 1864.
- PERUTZ, H. Wärme-und Brennmaterialien, ihre Anwendung für industrielle Zwecke. 8vo. 202 pp. Berlin, 1864.
- PROTEAUX, A. A Practical Guide for the Manufacturing of Paper and Boards. 8vo. 292 pp. Philadelphia, 1866.
- PUGH, E. A Report upon a Plan for the Organization of Colleges of Agriculture and the Mechanic Arts, with special reference to the Organization of the Agricultural College of Pennsylvania. Vol. XVIII., Pamphlets. Octavo series. 8vo. 35 pp. Harrisburgh, 1864.
- SCHICK, E. Katechismus der Warrenkunde. 12mo. 360 pp. Leipsig, 1871.
- SCHMIDT, Carl H. Technologisches Skizzenbuch. 4to. LIV. plates. Stuttgart, 1865.
- SCHULLER, Siegmund. Die Schule des Feuerlochwesens. 24mo. 221 pp. Leipsig, 1865.
- SOUBEIRAN, J. Léon. Nouveau Dictionnaire des Falsifications et des Alterations des Alimens, des Medicamens et de Quelques Produits Employés dans les Arts, L'Industrie et L'Economie Domestique. 8vo. 634 pp. Paris, 1874.
- SPRINGER, A. H. Handbuch der Kunstgeschichte. 8vo. 386 pp. Stuttgart, 1855.
- STAATSBUDGET, (Das,) und das Bedürfniss für Kunst und Wissenschaft im Königreich Hannover. 4to. Hanover, 1866.
- TWINING, Thomas. Technical Training. Being a Suggestive Sketch of a National System of Industrial Instruction, founded on a General Diffusion of Practical Science among the People. 8vo. 458 pp. London, 1874.
- URE, Andrew. Dictionary of Manufactures and Mines. 2 vols. 8vo. New-York, 1863.
- Supplement. 8vo. 745 pp. New-York, 1872.

- VALICOURT, E. de. Nouveau Manuel Complet du Tourneur. Vol. I.
24mo. 336 pp. Paris, 1848.
- WIECK, F. G. Das Buch der Erfindungen Gewerbe und Industrien.
5 vols. 12mo. Leipsig, 1861-1863.
- WIESNER, Julius. Gummiarten. Harze und Balzame. Die tech-
nischen verwendeten. 8vo. 205 pp. Erlangen, 1869.
- WILLARD and Shaw's Patent Tin Lined Lead Pipe. A Circular.
Vol. XVI., Pamphlets. Octavo series. 8vo. 21 pp. New-York, 1865.
- Improvements in the Construction of Lead Pipe.
8vo. 23 pp. New-York, 1865.
- WOODMAN, John S. An Address on the Inauguration of the Wor-
cester County Institute of Industrial Science. Vol. XVIII., Pam-
phlets. Octavo series. 8vo. 13 pp. Worcester, 1868.

See, also, International Exhibitions, p. 381.
Periodical Publications, *under* Chemical Tech-
nology, p. 257.

INTERNATIONAL EXHIBITIONS.

CENTENNIAL EXHIBITION, PHILADELPHIA,
1876.

KELLEY, William D. Speech on the Pecuniary and Political Value of the Proposed International Exhibition, delivered in the House of Representatives, May 5, 1874.
8vo. Washington, 1874.

EXHIBITION OF THE WORKS OF INDUSTRY OF
ALL NATIONS, LONDON, 1851.

REPORTS of the Juries on the subjects in the Thirty Classes into which the Exhibition was divided. 8vo. London, 1853.
TRAVAUX de la Commissions Française sur L'Industrie des Nations.
Tome I, parts 1, 2, 3, 5; Tome III, parts 1, 2; Tomes IV. to VIII. 12 vols. 8vo. Paris, 1858.

EXPOSITION DU HAVRE.

RIBEYRE, Felix. Les Annales de L'Exposition du Havre, 1868.
8vo. Paris, 1868.

EXPOSITION UNIVERSELLE DE PARIS, EN 1867.

BANKS, N. P. A Speech upon the Representation of the United States at the Exhibition of the World's Industry, Paris, 1867. Delivered in the House of Representatives, March 14, 1866. 8vo. 24 pp. Washington, 1862.
BARNARD, F. A. P. Report on Machinery and Processes of the Industrial Arts and Apparatus of the Exact Sciences. Paris Universal Exposition, 1867.
8vo. 669 pp., VII. plates. New-York, 1869.
BELGIQUE. Catalogue des Produits Industriels et des Œuvres d'Art. 12mo. 365 pp. Brussels, 1867.
BELGIQUE. Documents et Rapports. 3 vols. 8vo. Brussels.
BERICHTE über die Allgemeine Ausstellung zu Paris im Jahre, 1867, erstattet von den für Preussen und die Norddeutschen Staaten ernannten mitgliedern der internationalen Jury.
8vo. 261 pp. Berlin, 1868.
BERICHTE über die Welt-Ausstellung zu Paris, im Jahre, 1867.
6 vols., text; 1 vol., plates. 8vo. Vienna, 1869.

- BLAKE, William P. Report on Civil Engineering and Public Works of the Paris Exposition.
8vo. 49 pp. Washington, 1870.
- BLAKE, William P. Reports of the United States Commissioners to the Paris Universal Exposition, 1867.
6 vols. 8vo. Washington, 1870.
- CATALOGUE Descriptive des Collections exposées par la Commission Géologique du Canada. 8vo. 72 pp. Paris, 1867.
- CATALOGUE Officiel des Exposants Récompensés par le Jury International. 8vo. 455 pp. Paris.
- CATALOGUE of the British Section, containing a list of the Exhibitors of the United Kingdom and its Colonies, and objects which they exhibit. In English, French, German and Italian. With Statistical Introductions and an Appendix.
8vo. 1150 pp. London, 1867.
- CHEVALIER, Michel. Rapports du Jury International.
13 vols. 8vo. Paris, 1868.
- COMPLETE Official Catalogue of the Paris Universal Exhibition, 1867. English version, translated from the French Catalogue, published by the Imperial Commission. Second edition. 8vo. 1008 pp. London.
- D'ALIGNY, H. F. O. Minerals of the United States in the Paris Exposition, 1867. 8vo. 90 pp. Paris, 1857.
- D'ALIGNY, H. F. O., U. S. Commissioner, Huet, A., Geyler, F., and Lepauteur, C. Report on Mining and the Mechanical Preparation of Ores.
8vo. 104 pp., III. plates. Washington, 1870.
- DE CUYPER, Ch. Revue de L'Exposition de 1867. Mines, Metallurgie, Chimie, Mécanique, Navigation, Chemins de Fer, Constructions, Sciences et Arts Appliqués à L'Industrie. Tomes I. to IV. Text and plates. 6 vols. 8vo.
- HEWITT, Abram S. The Production of Iron and Steel in its Economic and Social Relations.
8vo. 104 pp. Washington, 1868.
- ITZENPLITZ, *Grafen von*. Katalog für die Sammlung der Bergwerks-und Steinbruchs-Produkte Preussens auf der Industrie und Kunstausstellung zu Paris im Jahre, 1867.
- JOHNSON, *Pres't.*, Andrew. A Message to the House of Representatives, transmitting a report from the Secretary of State concerning the Universal Exposition to be held at Paris, in the year 1857. 8vo. 110 pp. Washington, 1865.
- JOHNSON, *Pres't.*, Andrew. A Message to the House of Representatives, transmitting the report of Elliot C. Cowdin, Esq., Commissioner to the Paris Exposition of 1867, on Silk and Silk Manufactures. 8vo. 38 pp. Washington, 1868.
- LACROIX, Eugène. Études sur L'Exposition de 1867, ou Les Archives de L'Industrie aux XIX. Siècle. Description Générale, Encyclopédique, Méthodique et Raisonnée de L'État Actuel des Arts, des Sciences, de L'Industrie et de L'Agriculture, chez tous les Nations.
10 vols. 8vo., text and plates. Paris, 1867-1869.

- LE ROUX, Jules. *L'Industrie Moderne au Champ de Mars. Coup D'Œil sur L'Exposition de 1867.* 8vo. 310 pp. Paris.
- MUDGE, E. R., *United States Commissioner.* Assisted by John L. Hayes. *Report upon Wool and Manufactures of Wool.* 8vo. 143 pp. Washington, 1868.
- NOTICES sur les Collections, Cartes et Dessins. *Relatifs au Service du Corps Imperial des Mines.* 8vo. 315 pp. Paris.
- NOTICES sus les Modeles, Cartes et Dessins. ** Relatifs aux Travaux Publics.* 8vo. 548 pp. Paris, 1867.
- OPPERMAN, C. A. *Visites D'Un Ingenieur à L'Exposition Universelle de Paris, en 1867.* 2 vols. 8vo. text and plates. Paris, 1867.
- RAPPORTS du Comité des Poids et Mesures et de Monnaies de L'Exposition de 1867. 12mo. 153 pp. Paris, 1867.
- REPORTS on the Paris Universal Exhibition, 1867, Presented to both Houses of Parliament by Command of Her Majesty. Vols. II. to V., and Index Volume. 8vo. London, 1869.
- RITTENGER, G. von. *Kurze Mittheilungen über Berg-und-Hüttenwesens-Maschinen und Baugegenstände auf der Allgemeinen Industrie Ausstellung zu Paris, 1867.* 8vo. 71 pp. Vienna, 1867.
- SECOND Edition of Official Correspondence of the subject, published by the Department of State for the Information of the Citizens of the United States, containing General Regulations, Classification of Articles, &c. 4to. 43 pp. Washington, 1865.
- SMITH, J. L. *The Progress and Condition of several Departments of Industrial Chemistry.* 8vo. 146 pp. Washington, 1869.

INTERNATIONAL EXHIBITION, LONDON, 1862.

- DOCUMENTS Officiels completants les rapports du Jury International sur l'ensemble de L'Exposition de Londres de 1862. Vols. I., II., III., V. to VII. 6 vols. 8vo. Paris, 1864.
- REPORT of the Juries on the Subjects in the Thirty-Six Classes into which the Exhibition was divided. Imp. 8vo. London, 1863.
- TUNNER, P. *Berichte über jene Gegenstände der Londoner Welt-industrie Ausstellung von 1862 die den metallurgischen Progressen Angehören.* 8vo. 136 pp. Vienna, 1863.

WIENER WELTAUSSTELLUNG, 1873.

- ATTI Ufficiali della Esposizione Universale di Vienna del 1873. *Catalog Generale degli Espositori Italiani.* 8vo. 296 pp. Rome, 1873.
- AMTLICHER Katalog der Ausstellung des Deutschen Reiches. 16mo. 672 pp. Berlin, 1873.

- BELGIQUE. Catalogue des Produits Industriels et des Œuvres D'Art. 16mo. 373 pp. Brussels, 1873.
- BREWER, Eben. Official Catalogue of the American Department. 4to. 148 pp. London, 1873.
- CATALOGUE of the Exhibition. Printed for the Use of the British Jurors. 8vo. 174 pp. London, 1873.
- CATALOGUE Speciale de la Section Russe à L'Exposition Universelle de Vienna en 1873, publiée par la Commission Imperiale de Russie. 218 pp. St. Petersburg, 1873.
- COMMONWEALTH of Massachusetts. Report of the Commissioners to the Exposition at Vienna. 8vo. 91 pp. 1874.
- DESCRIPTIVE Catalogue of the Exhibits in the New-Zealand Courts of the Vienna Exhibition, 1873. 4to. 47 pp.
- DIE AUSSTELLUNG der Geologischen Lands-Untersuchung Schroedens auf der Wiener Weltausstellung. 8vo. Vienna, 1873.
- DIE AUSSTELLUNGS-OBJECTE der Königlichen Ungarischen Geologischen Anstalt auf der Wiener Weltausstellung. 8vo. 1873.
- DIE BERGBAUE und Eisenwerke der Steierischen Eisenindustrie-Gesellschaft. Eine Beilage zu den Ausstellungsgegenständen dieser Gesellschaft auf der Welt-Ausstellung 1873 en Wien. 8vo. Vienna, 1873.
- FRANCE. Produits Industriels. 12mo. 600 pp. Vienna, 1873.
- GENERAL Katalog. Hefts, I. to XIX. 8vo. 832 pp. Vienna.
- KAISERLICHEN Königlichen Geologischen Reichsanstalt. Catalogue ihrer Ausstellungsgegenstände bei der Wiener Weltausstellung. 8vo. 200 pp. Vienna, 1873.
- K. K. PRIV. österr. Staats-Eisenbahn Gesellschaft. Maschinenfabrik in Wien. Typen-Skizzen und Dimensionen der bei der Wiener Weltausstellung im Jahre, 1873, exponirten 5 Lokomotiven. V. plates. Small folio.
- KATALOG für die Sammlung der Bergwerks-Hütten-, Salinen-, und Steinbruchs-Producte von Elsass-Lothringen auf der Wiener Weltausstellung von 1873. 8vo. 98 pp. Strasburg.
- KERPÉLY, Anton. Das Eisen auf der Wiener Weltausstellung, 1873. 8vo. 229 pp., IV. plates. Schemnitz, 1873.
- L'EMPIRE du Brésil à L'Exposition Universelle de Vienna en 1873. 8vo. 364 pp. Rio Janeiro, 1873.
- LISTE der Mitglieder der internationalen Jury. 4to. 73 pp.
- MATKOVIE, Peter. Kroatien-Slavonien nach seinen Physischen und Geistigen Verhältnissen. Denkschrift zur Wiener Weltausstellung, 1873. 12mo. 112 pp. Agram, 1873.
- NORWEGISCHER Special Katalog der Weltausstellung, 1873, in Wien. Kunst-Industrie. 8vo. 77 pp. 1873.
- NOTICE sur les Objets Exposés par la Société des Charbonnages de Mariemont; L'Olive Chaud-Bisson & Carnieres et par la Société des Charbonnages de Bascoup. 8vo. Mons.
- OFFICIELER Austellungs-Berichte herausgegeben durch die General-Direction der Weltausstellung, unter redaction von Dr. Karl Theodor Richter.

Parts I. to LXXXVII. Vienna, 1873-1875.

PRELIMINARY Explanatory Circulars.

- 90 Circulars. 4to. Washington, 1873.
- RESUMÉ** du Catalogue de la Section Brésilienne à L'Exposition Internationale à Vienne en 1873. 12mo. 32 pp.
- SCHOTT, E.** Kurzer Bericht über die bei der Wiener Weltausstellung, 1873, zur Anschauung gebrachten Eisen-Hütten-Producte, Eisen-und Stahlarbeiten. 8vo. 34 pp. Leipsig.
- SPECIAL** Catalog der Ausstellung des Persischen Reiches. 8vo. 151 pp. Vienna, 1873.
- SPECIAL** Catalog der Ausstellung des Königreichs der Niederlande nebst einen uebersichtsplan dieser Ausstellung. 12mo. 166 pp. Vienna, 1873.
- WIENERBERGER** Ziegelfabriks-und Bau-Gesellschaft zur zeit der Wiener Weltausstellung, 1875. 8vo. 92 pp.
- ZUSAMMENSTELLUNG** der Catalogs Nummern die Einzelnen Länder nach Gruppen und Sectionen Geordnet. 8vo. 38 pp.

STATISTICS.

- AIM and Object of Scientific Education, as Provided in the Sheffield Scientific School of Yale College.
8vo. 24 pp. New-Haven, 1869.
- ASCHERSON, Fred. Deutscher Universitäts Kalender für das Sommer—Semestre, 1873. II. Thiel—Die Universitäten im deutschen Reich Oeststerreich, in der Schweiz und den russischen Oestseeprovinzen. 12mo. 173 pp. Berlin, 1873.
- BISHOP, J. L. A History of American Manufactures from 1608 to 1860. 3 vols. 8vo. Philadelphia, 1866.
- BROOKS, J. Speech on the Tariff. 8vo. 30 pp. Washington, 1870.
- CENSUS of the State of New-York for 1865.
4to. 869 pp. Albany, 1867.
- COLLEGE Directory, (The.) Vol. XVIII., Pamphlets. Octavo series.
8vo. 24 pp. Boston, 1872.
- CONGRÈS International de Statistique. Compte rendu general des travaux dans ses séances tenues à Bruxelles, 1853; Paris, 1855; Vienne, 1857, et Londres, 1860. Publiée sous la direction de M. le Dr. Engel. 4to. 473 pp. Berlin, 1863.
- COOLIDGE, Richard H. Statistical Reports on the Sickness and Mortality in the Army of the United States. Compiled from the Records of the Surgeon-General's Office, embracing a period of five years, from January, 1855, to January, 1860.
4to. Washington, 1860.
- DAS Staatsbudget und das Bedürfnisse für Kunst und Wissenschaft im Königreich Hannover. 4to. 92 pp. Hanover, 1866.
- DIE Organisation des Staatsbauwesens im Königreiche Hanover.
Folio. 55 pp. Hanover, 1861.
- EDMONDS, J. M. The Manufactures of the United States in 1860. Compiled from the Original Returns of the Eighth Census, under direction of the Secretary of the Interior.
4to. 742 pp. Washington, 1865.
- ELLIOTT, E. B. A Letter on the Credit of the U. S. Government, with Comparative Tables. Addressed to the Secretary of the Treasury. 8vo. 29 pp. Washington, 1871.
- The United States Customs Tariff under the Acts of May 1 and June 6, 1872. 8vo. 40 pp. Washington, 1872.
- ENGEL, Dr. Compte-Rendu Général des Travaux du Congrès International de Statistique dans ses seances tenues à Bruxelles, 1853; Paris, 1855; Vienne, 1857, et Londres, 1860. Publié par les orders de S. E. M. C. Compte D'Eulenburg.
4to. 273 pp. Berlin, 1863.
- Rechenschafts-Bericht über die Fünfte Sitzungs periode des Internationalen Statistischen Congresses in Berlin. Band I. Berichte über die Vorbereitungen des Congresses. Band II. Berichte über die Verhandlungen des Congresses.
2 vols. 4to. Berlin, 1865.

- GILLESPIE, W. M. Subjects and Methods of Instruction in Mathematics as prescribed for Admission to the Polytechnic School of Paris. Vol. I, Pamphlets. Octavo series. 8vo. 48 pp.
- GRAY, Asa. Sequoia and its History. An Address before the American Association for the Advancement of Science, delivered at a meeting held at Dubuque, Iowa, August, 1872. 8vo. 20 pp. Salem, 1872.
- HAYES, JOHN L. Protection as a Boon to Consumers. An Address delivered before the National Association of Knit Goods Manufacturers, at the Second Annual Meeting in New-York City, May 1, 1867. With a Letter from Mr. Samuel Bachel-der to Mr. John L. Hayes. 8vo. 50 pp. Boston, 1867.
- The Protective Question Abroad, and Remarks at the In-dianapolis Exposition. 8vo. 66 pp. Cambridge, 1870.
- HEWITT, Abram S. The Production of Iron and Steel in its Eco-nomic and Social Relations. 8vo. 104 pp. Washington, 1867.
- HOUGH, Franklyn B. Census of the State of New-York for 1865. Prepared from the Original Returns under the Direction of Francis D. Barbour, Secretary of State. 4to. 473 pp. Albany, 1867.
- JOHNSON, *Pres't.*, Andrew. A Message to the House of Repre-sentatives, transmitting the report of Elliot C. Cowdin, Esq., Commissioner to the Paris Exposition of 1867, on Silk and Silk Manufactures. Vol. XVIII, Pamphlets. Octavo series. 8vo. 38 pp. Washington, 1868.
- KENNEDY, Jos. C. G. Preliminary Report of the Superintendent of the Census, on the Eighth Census of the United States, 1860. 8vo. 294 pp. Washington, 1860.
- LE ROY, Alphonse. L'Université de Liège depuis sa Fondation. 8vo. 1179 pp. Liège, 1869.
- LYMAN, B. S. Scientific Education in its Relations to Industry. An Address delivered at the Sheffield Scientific School of Yale College. 8vo. 30 pp. New-Haven, 1867.
- MACEDO, Joaquim Manoel de. Notions de Chorographie du Brézil. Traduction de J. F. Holbout. 8vo. 504 pp. Leipsig, 1874.
- MANUFACTURES of the United States in 1860. Compiled from the original returns of the Eighth Census, under the direction of the Secretary of the Interior. 4to. 745 pp. Washington, 1865.
- MASSACHUSETTS Institute of Technology, &c. An Account of the Preliminary Proceedings. Vol. XIX., Pamphlets. Octavo series. 8vo. 23 pp. Boston, 1861.
- Institute of Technology. Outline of Studies in the Depart-ment of Practical Geology, Mining and Metallurgy of the School of Industrial Science. Vol. XVIII., Pamphlets. Octavo series. 8vo. 10 pp. Boston, 1864.
- Scope and Plan of the School of Industrial Science of, as re-ported by the Committee of Instruction of the Institute and adopted by the Government. Vol. XVIII., Pamphlets. Octavo series. 8vo. 28 pp. Boston, 1864.

- MEDICAL** and Surgical History of the British Army which served in Turkey and the Crimea. 2 vols. Folio. London, 1858.
- MORRELL, D. J.** The Protective Policy and the Warehousing System. A Report submitted to the House of Representatives, June, 1868, by Mr. Morrell, of Pennsylvania, from the Committee on Manufactures. Prepared by John L. Hayes. 8vo. 45 pp. Washington, 1868.
- The Protective Question at Home; being the Substance of a Report of the Committee on Manufactures, submitted to the Fortieth Congress by Hon. D. J. Morrell, of Pennsylvania. With Supplementary Notes by John L. Hayes.
- NEILSON, W. G.** A Statistical Chart, Illustrating the Growth of the Trade, the Development of the Internal Resources, and the Fluctuations in the Prices of the various Staple Products of the United States, from 1799 to 1869. Published by the Iron and Steel Association, Philadelphia.
- PERRAULT, J.** Revue Agricole, Manufacture, Commerciale et de Colonisation. 8vo. 384 pp. Montreal, 1863, 1864.
- POLYTECHNIC** College of Pennsylvania. A Statement of the Objects, Course of Instruction, &c., of the School of Mines, organized and opened in Philadelphia, under an Act of the Legislature incorporating the Polytechnic College of the State of Pennsylvania. Vol. XIX., Pamphlets. Octavo series. 8vo. 4 pp. Philadelphia, 1853.
- PROSTRATION** of American Industry. Repeal of the Ten Per Cent. Reduction of Duties. Verbatim Report of an Interview between a Delegation of Manufacturers and the Committee of Ways and Means of the House of Representatives at Washington, April 28, 1874. 8vo. 12 pp. Philadelphia, 1874.
- REPORT** of the Legislative Committee of the Commonwealth of Massachusetts on Pleuro-Pneumonia. 8vo. Boston.
- of the Sanitary Commission dispatched to the Seat of War in the East in 1855, 1856. 8vo. 301 pp. London, 1857.
- SCHOMBURGK, O. A. R. H.** Schomburgk's Reisen in Guiana und am Orinoco. 8vo. 510 pp. Leipsig, 1841.
- SHEFFIELD** Scientific School of Yale College—Aim and Objects of Scientific Education as provided in the. Vol. I., Pamphlets. Duodecimo series. 12mo. 24 pp. New-Haven, 1869.
- Scientific School (The) of Yale College, briefly described. Vol. I., Pamphlets. Duodecimo series. 12mo. 12 pp. New-Haven, 1870.
- STATISTICAL** Annual, (The.) Containing Full Tabulated Reports on the Leading Branches of Commerce and Finance in the United States. Published by the New-York Daily Bulletin Association. 4to. New-York. Report for 1872. 4to. 110 pp. New-York, 1873.
- STATISTICAL** Sanitary and Medical Reports of the Army for 1859. 8vo. 438 pp. London, 1861.

- STEWART, William M. Speech on the Bill to Establish a National School of Mines; delivered in the Senate of the United States, January 16, 1868. Vol. III., Pamphlets. Octavo series.
8vo. 16 pp. Washington, 1868.
- WALKER, Francis A. Report of the Superintendent of the Ninth Census of the United States. Compiled from the Original Returns, under the direction of the Secretary of the Interior. Vol. I. Population and Social Statistics of the United States. Vol. II. Industry and Wealth of the United States.
2 vols. 4to. Washington, 1870.
- WARREN, S. Edward. Notes on Polytechnic Schools in the United States; their Nature, Position, Aims and Wants. Vol. XIX., Pamphlets. Octavo series. 8vo. 58 pp. New-York, 1866.
- WELLS, David A. Reports of the Special Commissioner of Revenue. 2 vols. 8vo. Washington, 1866, 1867.
- WILSON, Jeremiah M., (Chairman.) Report of the Select Committee (No. 2) of the House of Representatives, appointed under the Resolution of January 6, 1873, to make inquiry in relation to the Affairs of the Union Pacific Rail Road Company, the Credit Mobilier of America, and other matters specified in said Resolution, and in other Resolutions referred to said Committee. 8vo. 786 pp. Washington, 1873.
- WINDOM, *Hon.* Wm. The Northern Pacific Railway: its Effect upon the Public Credit, the Public Revenues and the Public Debt. A Speech delivered in the House of Representatives, January 5th, 1869. Vol. XIX., Pamphlets. Octavo series.
8vo. 60 pp. Washington, 1869.
- WOODMAN, John S. An Address on the Inauguration of the Worcester County Institute of Industrial Science. Vol. XVIII., Pamphlets. Octavo series. 8vo. 13 pp. Worcester, 1868.
- YOUNG, Edward. Special Report on the Customs Tariff Legislation of the United States, with Appendices. 8vo. 137 pp. Washington, 1872.

VOYAGES AND TRAVELS.

- BERGH, C. A. Iakttagelser öfver Djurlifet i Kattegat och Skagerrack, gjorda under Kanobäten "Ingegerds" Expedition sommaren, 1870. Vol. VII., Pamphlets. Quarto series. 4to. 37 pp. 1870.
- BURKART, Joseph. Aufenthalt und Reisen in Mexico in der Jahren, 1825 bis 1834. 2 vols. 12mo. Stuttgart, 1836.
- BURMEISTER, Hermann. Reise nach Brasilien. 8vo. 608 pp. Berlin, 1853.
- DUFRENOY, A. Elie de Beaumont, Coste, Leone, and Perdonnet, Auguste. Voyage Metallurgique en Angleterre. Second edition. 2 vols. 8vo. text; Atlas, XXXVIII. plates. Paris, 1837.
- EMORY, W. H. Notes of a Military Reconnoissance from Fort Leavenworth, in Missouri, to San Diego; in California, including parts of the Arkansas, Del Norte and Gila Rivers. 8vo. 416 pp. Washington, 1848.
- EXPEDITION of an American Squadron to the China Seas and Japan, performed in the years 1852, 1853 and 1854, under the command of Commodore M. C. Perry, United States Navy, by order of the Government of the United States. Narrative of the Expedition. Vol. II. 4to. 414 pp., XVII. charts. Washington, 1856.
- GILLIMAN, A. M. Travels over the Table Lands and Cordilleras of Mexico. 8vo. 455 pp. Philadelphia, 1846.
- HABEL, M. A. Voyages dans la partie tropicale des deux Ameriques. Vol. X., Pamphlets. Quarto series. 4to. 4 pp. 1869.
- HAUSMANN, J. F. L. Reise durch Scandinavien. 5 vols. 8vo. Gottingen, 1811-1818.
- HUMBOLDT, Alexander von. Voyage aux Régions Equinoxiales du Nouveau Continent fait en 1799, 1800, 1801, 1802, 1803 et 1804, par Al. de Humboldt et A. Bonpland avec une Atlas, Geographique et Physique. 13 vols. 8vo. Paris, 1816-1831.
- IVES, Lieut. J. C. Report upon the Colorado River of the West. 4to. 364 pp. Washington, 1861.
- JONES, William A. Report upon the Reconnoissance of Northwestern Wyoming, including Yellowstone National Park, made in the summer of 1873. With appendix. 8vo. 326 pp., L. maps and charts. Washington, 1875.
- KEYSERLING, A. G. Wissenschaftliche Beobachtungen auf einer reise in das Petschora Land, im Jahre, 1843. Vol. IV., Pamphlets. Quarto series. 4to. 148 pp. St. Petersburg, 1846.

- MARCY, R. B. Explorations of the Red River of Louisiana, in the year 1852. 8vo. 320 pp., with II. maps. Washington, 1853.
- MAWE, John. Travels in the Interior of Brazil; with a Particular Account of the Gold and Diamond Districts. 8vo. 493 pp. London, 1821.
- MAXIMILIAN, *Prince*. Reise nach Brasilien in der Jahren 1815 bis 1817. 2 vols. 4to. Frankfort, 1820, 1821.
- MONTPÉREUX, Frederick D. de. Voyage Autour du Caucase, chez les Tcherkesses et les Abkhases, en Colchide, en Géorgie, en Arménie et en Crimée. 4 vols. 12mo. Paris, 1859.
- MULLER, J. W. Fragmentarische Mittheilungen über die in Afrika Gemachten Reisen. 4to. 38 pp. 1849.
- PARROT, Frederick. Account of a Journey to Ararat. Translated by W. D. Cooley. Illustrated. 12mo. 379 pp. New-York, 1846.
- PELZ, E. Compass für Auswanderer. 16mo. 142 pp. Leipsig, 1869.
- PIKE, Z. M. An Account of Expeditions to the Sources of the Mississippi, and through the Western Parts of Louisiana to the Sources of the Arkansas, Kansas, La Platte and Pierre Jaun Rivers; and a Tour through the Interior Parts of New Spain, in 1807. 8vo. 277 pp., and 3 appendices. Philadelphia, 1810.
- SCHICKH, Melchior E. v. Anleitung zur zweckmässigsten Bereisung der Semring-Eisenbahn von Gloggnitz bis Mürzzuschlag. Vol. VI., Pamphlets. Octavo series. 12mo. 14 pp., I. plate. Vienna, 1851.
- SCHOMBURGK, O. A. R. H. Schomburgk's Reisen in Guiana und am Orinoco. 8vo. 510 pp. Leipsig, 1841.
- STANSBURY, Howard. Exploration and Survey of the Valley of the Great Salt Lake of Utah, including a Reconnoissance of a New Route through the Rocky Mountains. 8vo. 487 pp. Philadelphia, 1852.
- UNITED STATES Naval and Astronomical Expedition to the Southern Hemisphere during the years 1849, 1850, 1851 and 1852. Gilliss, *Lieut. J. M.*, Superintendent. Natural History. Vol. I. Chili. Vol. II. The Andes and the Pampas. 2 vols. 4to. Washington, 1855.
- VISQUESNEL, A. Journal d'un Voyage dans la Turquie d'Europe. Vol. VII., Pamphlets. Quarto series. 4to. 20 pp.
- VON MULLER, J. W. Fragmentarische Mittheilungen über die in Afrika Gemachten Reisen. 4to. 18 pp. 1849.
- WHITNEY, J. D. The Yosemite Guide Book. 4to. 155 pp., 11 maps, 1870.

WORKS OF GENERAL REFERENCE.

- AINSWORTH. Latin and English Dictionary, with numerous Additions, Emendations and Improvements, by Rev. B. W. Beatson. Revised and corrected by William Ellis.
8vo. 1332 pp. London, 1847.
- ANTHON, Charles. A Classical Dictionary. 4to. New-York, 1855.
- ANTISELL, T. A Hand-Book of the Useful Arts.
12mo. New-York, 1852.
- ARAGO, François. Notices Biographiques.
3 vols. 8vo. Paris, 1854, 1855.
- Notices Scientifiques. Vol. I. 8vo. Paris, 1854.
- BARNARD, F. A. P. Address delivered before the American Association for the Advancement of Science, at the Chicago Meeting, August, 1868. 8vo. Salem, Mass., 1869.
- BEIL, J. A. Technologisches Wörterbuch der Deutschen, Französischen, und Englischen Sprache. 8vo. Wiesbaden, 1853.
- BESCHERELLE aîné. Dictionnaire Universel de la Langue Française.
2 vols. 4to. Paris, 1846-1847.
- DONNEGAN, James. Greek and English Lexicon.
8vo. 1413 pp. Philadelphia, 1844.
- ERKLARENDES Wörterbuch der im Bergbau in der Hüttenkunde und in Salinwerken vorkommenden-technischen Kunstausdrücke und Fremdwörter. 8vo. Burgsteinfurt, 1869.
- FLÖGER, J. G. Vollständiges English-Deutsches und Deutsch-Englisches Wörterbuch enthaltend alle in den beiden Sprachen allgemein gebräuchliche Wörter.
2 vols. 8vo. Leipsig, 1847.
- FRANKE. Technological Dictionary. English, German, French.
8vo. 616 pp. New-York, 1855.
- GIBBS, G. A Dictionary of the Chinook Jargon. 8vo. 51 pp. 1863.
- HENWOOD, W. J. Address before the Royal Institution of Cornwall. 8vo. 65 pp. Truro, 1871.
- HERSCHEL and Maise. A Manual of Scientific Discovery.
8vo. 429 pp. London, 1859.
- HILPERT, J. L. Englisch-Deutsches und Deutsch-Englisches Wörterbuch. 4 vols. 4to. Karlsruhe, 1857.
- HOMANS, J. Smith, Jr. A Cyclopedia of Commerce and Commercial Navigation. 2to. 2007 pp. New-York, 1858.
- LUCAS, Newton Ivory. Deutsch-Englisches Wörterbuch mit besonderer Rücksicht auf den gegenwärtigen Standpunkt der Literatur und Wissenschaft. 2 vols. 8vo. Bremen, 1868.
- English-Deutsches Wörterbuch mit besonderer Rücksicht auf den gegenwärtigen Standpunkt der Literatur und Wissenschaft. 2 vols. 8vo. Bremen, 1854-1856.

- M'CULLOCH, J. R. *A Universal Gazetteer.*
4 vols. 4to. New-York, 1843.
- MOTHES, O. *Technological Dictionary.* English, German, French.
8vo. 661 pp. Wiesbaden, 1870.
- NEUMANN and Barette. *A Dictionary of the Spanish and English Languages.*
8vo. 1335 pp. Boston, 1852.
- NEWBERRY, J. S. *Modern Scientific Investigation; its Methods and Tendencies.*
8vo. 23 pp. Salem, 1867.
- NEW-YORK State Library. *Annual Reports and General Catalogues.* A Series of Annual Reports, comprising the additions made to the Library during the years 1848 to 1872.
17 vols. 8vo. Albany, 1848-1873.
- *Complete Catalogue of the Library.* 8vo. 294 pp. 1846.
- *The same as above. Vol. I. General Library.*
8vo. 987 pp. Albany, 1856.
- *The same as above. Vol. II. Law Library.*
8vo. 402 pp. Albany, 1856.
- *The same as above. Vol. III. Maps, Manuscripts, Medals, &c.*
8vo. 274 pp. Albany, 1857.
- *General Library. First Supplement.* 8vo. 1084 pp. 1861.
- *Law Library. First Supplement.*
8vo. 180 pp. Albany, 1865.
- POGGENDORFF, Johann Christian. *Biographisch Literarisches Handwörterbuch zu Geschichte der Exacten Wissenschaften.*
2 vols. 8vo. Leipsig, 1858-1863.
- REINWALD, Ch. *Catalogue Annuel de la Librairie Française, pour les années 1858 to 1867 and 1869.* 11 vols. 12mo. Paris.
- REPERTORIUM Commentationum a Societatibus Litterariis Editarum. *Secundum Disciplinarum Ordinem digessit I. D. Reuss.*
16 vols. 4to. Gottingen, 1801-1821.
- *der Technischen Literatur.*
Vol. I. Embracing the years 1823 to 1853. Edited by Dr. Schubarth, Berlin. 1049 pp. 1856.
- Vol. II. Embracing the years 1854 to 1868. Part 2. Edited by Bruno Kerl. 656 pp. Leipsig, 1873.
- RODWELL, G. F. *A Dictionary of Science.* 8vo. London, 1871.
- ROYAL Society's Catalogue (The) of Scientific Papers. (1800-1863.)
6 vols. 4to. London, 1867-1872.
- SMITHSONIAN Institution Publications:
- *Catalogue of the Publications of Societies and of Periodical Works in the Library of the Smithsonian Institution, July 1, 1858. Foreign Works.* 8vo. 259 pp. 1859.
- *The same as above. Corrected to January 1, 1866.*
8vo. 591 pp. Washington, 1866.
- *Catalogue of the Publications of the Smithsonian Institution corrected to June, 1862.* 8vo. 44 pp. Washington, 1862.
- *Publications of the Smithsonian Institution corrected to July, 1872.* 8vo. 20 pp. 1872.
- SPIER and Surenne. *French and English Pronouncing Dictionary.*
Revised by G. P. Quackenbos. 8vo. New-York, 1858.
- WORCESTER, Joseph E. *A Dictionary of the English Language.*
4to. 1786 pp. Boston, 1860.

MISCELLANEOUS.

- AN HISTORICAL Notice of the Essex Institute, with the Act of Incorporation, Constitution and By-Laws. 8vo. Salem, 1866.
- BECK, R. and J. Illustrated Catalogue of Scientific Instruments. *Presentation copy.* 8vo. 141 pp. London, 1865.
- BEEKMAN, James W. Centenary Address delivered before the Society of the New-York Hospital, Monday, July 24, 1871. With an Appendix. 8vo. 44 pp. New-York, 1871.
- The Founders of New-York. An Address delivered before the Saint Nicholas Society of the City of New-York, Saturday, December 4, 1869. 8vo. 36 pp. New-York, 1869.
- BERICHTE über die Thätigkeit der Allgemeinen sektion der Schlesischen Gesellschaft, im Jahre, 1869. 4to. 16 pp. 1860.
- CUVIER, J. Recueil des Éloges Historiques des membres de l'Académie Royale des Sciences, 1800 à 1810 les dans les seances publiques de L'Institute Royale de France. 3 vols. 12mo. Paris, 1819-1827.
- DAVY, Sir Humphrey. The Collected Works of. Edited by his brother, John Davy. 8 vols. 8vo. London, 1839. Vol. I. The Life of Sir Humphrey Davy. 475 pp.
- EVANS, Thomas W. Essais D'Hygiene et de Therapeutique Militaires présentés a la Commission des États-Unis. 8vo. 385 pp. Paris, 1865.
- HALL, A. Catalogue of the Historical and Antiquarian Collection in the State Cabinet, N. Y. 8vo. 20 pp.
- HUMBOLDT, Alexander von. Essai Politique sur le Royaume de la Nouvelle Espagne. Second edition. 4 vols. 8vo. Paris, 1825-1827.
- POLAIN, L. L'Histoire de L'Ancien Pays de Liege. 2 vols. 8vo. 1844.
- Récits Historiques sur L'Ancien Pays de Liege. 12 mo. 461 pp. Brussels, 1866.
- RAMSDEN, Jesse. Description of an Engine for Dividing Mathematical Instruments. 4to. 30 pp., VII. plates. London, 1777.
- RAUCH, John H. Public Parks: their effects upon the Moral, Physical and Sanitary Condition of the Inhabitants of Large Cities; with special reference to the City of Chicago. Vol. XIX., Pamphlets. Octavo series. 8vo. 101 pp. Chicago, 1869.
- SALVÉTAT, Louis Alphonse. Recueil des Travaux Scientifiques de M. Ébelmen. Précédé d'une notice sur M. Ébelmen par E. Chevreuil. 2 vols. 8vo. Paris, 1855.
- STANLEY, J. M. Portraits of North American Indians. *Smith. Misc. Coll.* 8vo. 76 pp. Washington, 1852.

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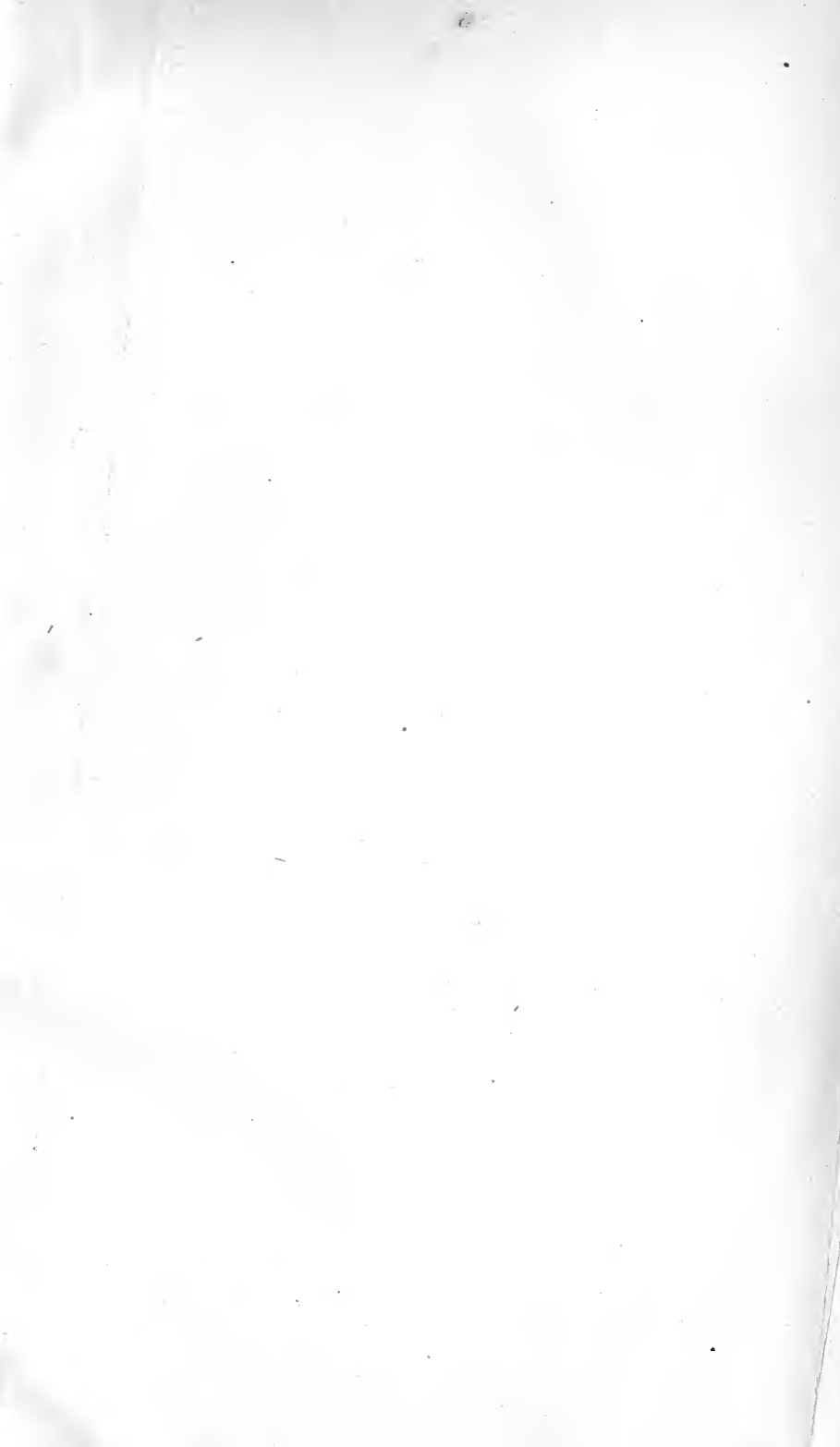
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